REPORT DOCUMENTATION PAGE

Form Approved
OMB NO. 0704-0188

1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	AUG 2002	FINAL REPORT, 07-00 TO 07-01

4. TITLE AND SUBTITLE
CASE STUDY: NATIONAL NAVAL MEDICAL CENTER
A GRADUATE MANAGEMENT PROJECT

5. FUNDING NUMBERS

6. AUTHOR(S)
LIEUTENANT (JG) MELODY S. PEALE
MEDICAL SERVICE CORPS, USNR

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
NATIONAL NAVAL MEDICAL CENTER BETHESDA
8901 WISCONSIN AVE, BETHESDA, MD 20889

8. PERFORMING ORGANIZATION

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U. S. ARMY MEDICAL DEPT CENTER AND SCHOOL
BLDG 2841 MCCS-HRA U.S. ARMY-BAYLOR PROGRAM IN HCA
3151 SCOTT RD SUITE 1412
FORT SAM HOUSTON, TEXAS 78234-6135

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

32-01

11. SUPPLEMENTARY NOTES
The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Navy position, policy or decision, unless so designated by other documentation.

12 a. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution unlimited.

12 b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

The National Naval Medical Center (NNMC), Bethesda, MD reinvented itself on July 3, 2000 when it transformed from a traditional stovepipe organization into a service line health care delivery system. In less than six months, beginning shortly after the new commander took the helm in November 1999, the Board of Directors resigned their positions as the initial step to make way for the incoming leadership of the new service line concept. Constant communication was a critical ingredient in gaining the support of the NNMC staff and patients as the stress of change gained momentum in direct relation to the speed of the Transformation.

The Information Technology Service (ITS) Line at NNMC supported the Transformation from its inception. ITS staff provided technical support to staff relocating to new positions and workspaces, while at the same time improving their own efficiencies as they responded to the daily calls for technical computer assistance. However, the ITS Line was not without its own organizational stresses; it faced similar organizational behavior concerns experienced by any workplace in the midst of major change. This case study attempts to identify, question and analyze various situations that occurred within NNMC and specifically within the ITS Line.

14. SUBJECT TERMS
National Naval Medical Center; organizational behavior; service line; information technology; case study

15. NUMBER OF PAGES
111

16. PRICE CODE

17. SECURITY CLASSIFICATION OR REPORT	18. SECURITY CLASSIFICATION ON THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
N/A	N/A	N/A	UL

NSN 7540-01-280-5500

Standard Form 298 (Rev.2-89)
Prescribed by ANSI Std. 239-18
298-102

Case Study: National Naval Medical Center

A Graduate Management Project

Submitted To

The Faculty of the U.S. Army-Baylor University

Graduate Program in Healthcare Administration

In Partial Fulfillment of the

MHA Degree Program

By

Melody Sena Peale, LTJG, MSC, USNR

June 10, 2002

Acknowledgments

Captain Thomas Candelaria, USN… for your willingness to allow me to learn all I could about NNMC Bethesda and the people who make it the President's Hospital. Your initial introduction to the senior leadership eventually led to my participation in many diverse projects throughout the organization.

Commander Steve Griffitts, USN… for your continual cooperation and flexibility as I pursued my quest to complete this project.

Lieutenant Eric Timmens, USNR… for your willingness to allow me to shadow your movements as Assistant Director for Administration. Under your guidance I was able to contribute to several significant NNMC projects.

Commander Daniel Dominguez, USN, and Major Richard Thorp, USA … for your patience and guidance throughout the past couple of years.

Lieutenant Commander Dave Peterson, USN and Mr. Joey Sowell… for giving me the opportunity to learn about the IM/IT world.

ITS Staff… for allowing me to live in your world and giving me the insider's perspective along with the bird's eye view.

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Executive Summary

The National Naval Medical Center, Bethesda, Maryland reinvented itself on July 3, 2000 when it transformed from a traditional stovepipe organization into a service line health care delivery system. In less than six months, beginning shortly after the new commander took the helm in November 1999, the Board of Directors resigned their positions in order to make way for the incoming leadership of the new service line concept. Some of the former board members applied for positions on the board while others moved onto other jobs within NNMC or elsewhere. Constant communication was a critical ingredient in gaining the support of the NNMC staff and patients as the stress of change gained momentum in direct relation to the speed of the Transformation.

The Information Technology Service (ITS) Line at the National Naval Medical Center supported the Transformation from the very beginning. ITS staff provided technical support to staff relocating to new positions and offices, while at the same time improving their own efficiencies as they responded to the daily calls for technical computer assistance. However, the ITS Line was not without its own organizational stresses; in fact, the ITS line faced similar organizational behavior concerns that any workplace in the midst of a major change experiences. After several months of direct daily contact with the ITS staff, this

researcher attempts to identify, question and analyze various situations that occurred within NNMC and specifically within the ITS Line, an organization within an even larger organization, both going through a time of major organizational change.

National Naval Medical Center

Origin of Hospital

The National Naval Medical Center (NNMC), located in Bethesda, Maryland, was founded as a tertiary care facility for World War II sick and injured. NNMC has been at its present location since its 1942 commissioning. The history of the institution is highlighted by the nation's favorite sons such as President Franklin Delano Roosevelt who personally selected the site for Bethesda Naval Hospital on July 5, 1938. Ground was broken for the naval medical center on June 29, 1938 and the doors officially opened with its commissioning on February 5, 1942. The original medical center was comprised of the naval hospital, the Naval Medical School of Health Sciences Education and Training (now the Naval School of Health Sciences), the Naval Medical Research Institute (now the Naval Medical Research Center), and the Naval Dental School (now the National Naval Dental Center) (History, 2000).

The NNMC mission became regional on January 1, 1973 with the establishment of the National Naval Medical Center Region. At that time, all naval health care facilities within the Naval District Washington were placed under the authority of the commanding officer of the medical center. September 1, 1982 marked another change in the center's mission when it was reorganized into the Naval Medical Command, National Capital

Region (NMCNCR). The region encompassed outlying clinics as far away as Willow Grove, Pennsylvania and Earle, New Jersey. Prior to the current Transformation of 2000, the latest reorganization took place on January 1, 1989, when NMCNCR became the National Naval Medical Center (NNMC) once again.

The facility in July 1999 was at a 242 bed operating capacity and employed approximately 3,500 employees (military and civilian). NNMC enjoyed a renowned reputation as a leading institution providing state-of-the-art medical care for decades.

Purpose

The project revolves around two general purposes. First, present various scenarios ("case studies") that occurred at NNMC during the Transformation, focusing mainly on those situations that involved the Information Technology Service. The second purpose requires readers to evaluate the actions taken by the organization as it responds to specific situations encountered in an effort to provide an answer to the following questions:

1. What was the overall impact of the Transformation?
2. What was the overall impact of the Transformation upon the Information Technology Service?
3. How effective was NNMC's realignment to the service lines in achieving the key objectives of Transformation listed below in general as well as in relation to ITS? In terms

of strategic management and planning, what was the role of ITS and how effective was its role during the realignment?

- Expand primary care and other services at NNMC
- Enhance the quality of our medical services
- Support growth opportunities for our dedicated staff and GME programs
- Strengthen customer service systems, processes and standards to enhance efficiency
- Provide a more productive, streamlined and enjoyable visit for our patients

4. How can ITS realign existing resources following the service line model to achieve the key objectives of Transformation? (Note: The ITS officially adopted the service line concept in April 2001, six months after NNMC's initial Transformation Day. ITS was among the last services to apply the SLLT concept due primarily to its primary support function to the rest of the command as they migrated to the SLLT concept. ITS was intimately involved with providing a smooth transition for other services that provide direct patient care.

NNMC service line leadership teams (SLLTs) developed the following vision statement, mission statement, and goals and objectives for FY 2001.

Vision Statement (Brochure, Transformation and You, 2000)

NNMC will be the flagship of force health protection and world-class health care.

Mission Statement (Brochure, Transformation and You, 2000)

- We maximize our operational readiness and keep the Uniformed Services mission-ready.
- We provide quality primary care and specialty services in a caring, patient-centered environment.
- We deliver distinguished graduate and undergraduate medical education, and ensure professional development for all staff members.
- We develop and export innovations in health care, informatics, and research.
- We provide outstanding base operating support to tenant commands co-located on the NNMC compound.
- We care for the Nation's leaders.
- We are the President's hospital

NNMC Goals and Objectives

- The USNS Comfort will be the readiness platform of choice for operational commanders. (Note: As a leader in Force Health Protection, NNMC supports five operational platforms of 1500 personnel directly supporting USNS COMFORT, USS BELLEAU WOOD, USS WASP, Fleet Hospital Camp Lejeune and a Marine Corps Unit.)
- Our information management and information technology supports optimal decision-making.
- We will use best business practices to become a most effective and efficient organization.
- We will be the Command of choice for duty assignment, GME and training.
- We will be the provider of choice for quality healthcare.
- We will maximize the health of our patient population.

A Brief History of TRICARE

NNMC's recent history dealt with the Department of Defense (DoD) implementation of a new regionally managed health care program, TRICARE, in November 1995. NNMC is part of a large healthcare system, TRICARE Region One, which includes the following:

- 13 states plus the District of Columbia

- 22 Military Medical Treatment Facilities
- 4 Uniformed Services Family Health Plans

A brief explanation of the program is provided for the benefit of readers new to TRICARE:

Under TRICARE, networks of civilian health care professionals agree to supplement the health care resources of the Army, Navy, and Air Force. TRICARE provides health care for active duty and retired members of the uniformed services, their families and survivors and offers eligible beneficiaries the following three choices:

- TRICARE Prime enrollment, which provides a health maintenance organization (HMO) type source of care with very low costs. Military Treatment Facilities (MTFs) are the principal source of health care for Prime enrollees.
- TRICARE Extra, which provides an expanded network of providers that offers reduced cost-sharing, does not require enrollment, and can be used on a case-by-case basis.
- TRICARE Standard, which is a fee-for service option (What is TRICARE, 2000)

How did TRICARE affect NNMC?

What was the overall effect of TRICARE on the Graduate Medical Education Program? If there are no inbound patient referrals, there are no specialty referrals for the residents to learn from and therefore GME suffers. TRICARE has effectively cut the GME program by increasing access to care. (Fierek, personal communication, 1999) The question to ask therefore is "where do we get the referrals necessary for the GME program?"

Prior to the June 1998 TRICARE implementation in Region I, NNMC was a worldwide referral source. Primary care was not a focus at NNMC. NNMC was an inbound referral site that received patients from throughout the continental United States as well as overseas, such as mainland Europe.

NNMC's desire at that point was to have a robust primary care base with open enrollment (access to care), in an attractive facility, with easy access to feed into the GME that then would feed into NNMC. The Military Family Health Clinic was stood up in February 2000 to originally support 12,000 enrollees (the original goal). This goal was met within 6 months & by August 2000 had already reached 15,000 with no existing cap.

What did TRICARE really do? TRICARE put together a network that made access to care more convenient for the patients. For example: a sailor with a GI problem is stationed at Willow Grove, Pennsylvania. Rather than transport him all the way to

NNMC, in Bethesda, Maryland, TRICARE can provide care near where he lives.

NNMC lost its referral base when patients were no longer required to seek specialty care only at NNMC. These patients now had the option to choose primary care managers outside the military health system if they were willing to pay for those services, either in whole or part. Under the pre-TRICARE days, these patients were seen for their primary care at outlying clinics in areas as far away as southern Maryland or New Jersey. These branch medical clinics (BMCs) fall under the direct purview of NNMC. Specialty care was automatically referred to NNMC from the BMCs, oftentimes requiring patients to travel hundreds of miles to referral appointments at NNMC. TRICARE implementation gave military physicians the option to send consultation requests locally vice directly to military medical centers such as NNMC. In the past, NNMC's outlying clinic funneled a steady stream of patients into the specialty clinics and therefore supplemented the Graduate Medical Education (GME) programs. With the advent of TRICARE, patients now had the option of receiving care from wherever they chose with TRICARE approval, as long as they were willing to pay for all or part of the total cost of care (cost-sharing). Patients no longer had to travel great distances for referral care. The shift of patient services from within the NNMC system to external choices created

a need for additional specialty training within NNMC to make up for the decrease of specialized training created by TRICARE. Graduate medical programs began to suffer from the lack of a primary care referral base that formerly came from these outlying clinics and NNMC had to answer to the needs of the GME program managers. The bigger picture for Navy medicine dealt with the necessary steady flow of new physicians to Navy medicine and specifically of new residents to NNMC. These residents and physicians were attracted to NNMC's outstanding reputation as a thriving location for GME programs, which appeared to be threatened by the decreasing number of possible specialty cases coming into the facility.

In response to increasing health care costs in the 1990s, the United States health care system was experiencing a shift from inpatient care to outpatient services with an increasing focus on prevention and wellness. The overall effect to NNMC and other military treatment facilities was a corresponding shift of services and focus to prevention and wellness. The desire to keep people out of the hospital was another driving force for change in the health care delivery system and NNMC had to respond in order to ensure its survival in a fluid environment increasingly affected by fiscal issues.

The Change of Command: a Turning Point

November 18, 1999 ushered in the dawn of a new commanding officer at the National Naval Medical Center. The Navy Surgeon General, the guest speaker at the NNMC change of command ceremony on November 18, 1999, made significant statements, interpreted by those in attendance, that challenged the incoming commanding officer to change the focus and direction of her new command. (Fierek, personal communication) A scant two months later, in January 2000, the Surgeon General met with the new commander and her Board of Directors. He spoke of several primary topics, such as parking issues and emergency room management, and stressed that NNMC needed to change direction.

The winter months of January and February 2000 involved several High Performance Organization (HPO) Seminars with the command leadership and staff as a result of High performance indicators from a Fall 1999 study that specifically indicated areas of improvement such as decreasing market share. The HPO Seminars were a logical step from both the Surgeon General's challenge to change and improve.

With the motivational push from the Surgeon General, the command leadership decided to take action. The Board of Directors scheduled a three-day offsite in March 2000 with the intention of holding a strategic review of NNMC, which resulted

in the beginnings of a new organizational plan. A major realignment occurred in just three days!

A Historical Perspective of Transformation

The quality of health care provided throughout America is a leading issue of concern among legislators and the general public. Quality was not only determined by the care received, but is now also defined as the ability to access care and the level of customer service provided. A patient's overall experience determined the general opinion of the level of quality care received. A recent analysis of NNMC revealed opportunities to improve primary care delivery and improve the effectiveness of the specialty care referrals process. Since specialty care referral funneled directly from the primary care physicians, the NNMC leadership was aware that realignment of services that focused on the customer, or the patient, was a step in the right direction. The desire for this level of optimization would increase referrals to NNMC while also strengthening current graduate medical education programs. (Martin, K. 2000, Transformation Information Brief)

According to the NNMC Commander, NNMC needed to change. NNMC had long been a picture-perfect example of the traditional "stovepipe" organization. The organizational structure that existed for decades prior to July 2000 had a Chief of Clinical Staff and nine "stovepipes" or directorates assigned according

to function (see Appendix H). These directorates were Hospital Administration, Medical Services, Surgical Services, Clinical Support Services, Nursing Services, Occupational and Community Health, Healthcare Operations, Resources Management, and Pastoral Care Services. A Director of a particular directorate was at the helm of the traditional "stovepipe". The traditional structure of each directorate follows:

- Director
- Department Head
- Division Leader
- Section Leader
- Branch

This model promoted a "stovepipe" mentality that threatened communication and collaboration throughout the organization. Communication might go up and down within a particular "stovepipe" but it proved difficult to get communication across the organization. In a concerted effort to increase communication and meet the command's new vision and mission statements and goals and objectives that were stated previously, the Commander sought to evolve NNMC into a collaborative practice environment, a matrix organization that would provide the necessary support for a successful Transformation.

In her brief to visiting JCAHO surveyors in May 2001, she noted that the recent NNMC environmental assessment clearly showed that it was getting more difficult to respond to the rapidly changing healthcare environment. The data showed the following:

- Low primary care (TRICARE) enrollment
- Declining market share
- No competitive market advantage
- High cost per work unit
- Unpredictable GME patient volume

NNMC was also unable at the time to respond to the challenge of the Military Health System's Optimization with its fragmented delivery system, uncoordinated care and unresponsive systems, processes and schedules. The commander emphatically told the audience at the JCAHO leadership brief also in May 2001, as she was oft heard to say in the preceding months, "if we continue to do what we always did, we will always get what we always got."

According to the NNMC Public Affairs Office, several significant trends were also noted in recent years, which led to the Transformation. An upward trend was observed for outpatient operations from 5,800 outpatient operations in 1997 to a projected 13,000 outpatient operations in 2000 while the number of inpatient operations decreased from 17,300 in 1993 to a

projected 9,400 in 2000 (note: NNMC began collecting outpatient operations data in 1997). This reflects a corresponding change in American health care delivery: a decreasing number of inpatient bed days per patient in order to decrease overall health care costs; a corresponding shift to a prevention and wellness focus; and other significant managed care influences. Although the rest of the American healthcare system has experienced an increase in the number of outpatients within the last few years, the situation differs here at NNMC. While the number of inpatients at NNMC decreased from 17,000 in 1993 to a projected 9,500 in 2000, the number of outpatient visits also decreased. NNMC experienced a significant negative financial impact as a result of the gradual loss of outpatients to local area competitors in a managed care environment, such as Walter Reed Army Medical System to the east, Malcolm Grow Air Force Medical Center to the south and private providers. Why did this phenomenon occur and what could NNMC possibly do to improve these numbers (E. Austin, personal communication, November 1, 2000)? The decreasing number of outpatients treated at NNMC contributed significantly to the growing need for a reorganization of services at NNMC but there was also the realization among the leadership that the answers also lay in the mechanics and accuracy of the methodologies used to collect data.

As American health care shifts its priorities from the treatment of illnesses and injuries to disease prevention and wellness programs, NNMC must also place an increased emphasis on wellness-based primary care services to reflect society's shift. The first thing NNMC needed to recognize at all levels of the organization was that they needed to keep the patient as their focus. Patient focused care became the command's central theme, their "conceptual framework."

The goals of transformation were the following (as shown during the JCAHO Leadership brief):

- Prevention and Wellness Directorate organized to enhance our patient base and increase portals of entry for primary care
- Restorative Care Directorate organized to optimize delivery of specialty care
- Coordination with GME Program Directors to ensure integrity of programs
- Consolidation of all of the factors of production into integrated service lines

In order to accomplish the above goals, a number of steps had to occur. NNMC had to redistribute resources to support mission priorities. Common performance expectations and outcome metrics with accountability for mission support was also provided by the leadership. Decision making at the top levels of leadership was

streamlined (i.e. BOD voting process to include decision papers). The leadership also decided to realign incentives and rewards to support mission contributions throughout the command, as a result of staff comments and criticisms during pre-Transformation focus groups.

The most notable change of the Transformation was the realignment of many of the clinical areas into eleven new service lines within two new directorates. This organizational change allowed for a "flattening" of the organization. (See Appendix B) A matrix organizational model was created beginning with the Commander and Deputy Commander and six Directors: Prevention and Wellness, Restorative Care, Clinical Support, Managed Care, Resources and Administration. All directorates have newly created service lines, which group like patient services under one directorate and enhancing patient care, coordination and communication. Note: Departments were now called "services," a term that current and incoming personnel still struggle to use on a daily basis. Cross functional positions were also established which cross and communicate with all directorates (services) and also serve as members of the Board of Directors: Chief of the Clinical Staff, Chief of the Nursing Staff, Command Master Chief, Director of Medical Education, Chief of Staff for Optimization, and a representative of the civilian staff. Other entities which cross and

communicate but are not BOD members are the Executive Committee of Medical Staff (ECOMS), Executive Committee of Nursing Services (ECONS), major command committees and Performance, Evaluation and Improvement (PE and I). A final strategic move was the creation of cross-functional Objective Teams that ensured the Strategic Plan and Annual Objectives were operationalized (K. Martin, Leadership Brief).

The intent of the realignment of the specialty services was to improve the coordination of treatment for patients with complicated illnesses since it promotes more direct lines of communication between a patient's primary care manager (PCM) and other specialties within the hospital. In addition to increasing patient access and convenience, the realignment of services also conveniently organized similar specialties under the same service line.

The Transformation not only affected health care delivery to the patients, but also affected the staff members who delivered the care. The realignment of services into more convenient and related service lines also established Service Line Leadership Teams (SLLT) made up of at least a senior ranking physician (O5 to O6), a senior ranking military or civilian nurse (O5 to O6 or GS11/12), a health care administrator (O2-O3), and a senior enlisted leader (E7 and above). The SLLT was tasked with the general management of the

service line it served. The SLLT also provides their staff a direct line of communication to the Board of Directors as well as the opportunity to organize health services delivery into a more streamlined, practical and efficient system.

As the organization changed structurally on paper, it was necessary to physically move people to new positions as funding permitted. Geographic relocation of the service line components into common areas would be optimal and would capitalize on efficiencies. Using the HPO model, senior leadership, for instance, was required to interview for their positions as directors, team members, or service chiefs and managers. In an interesting and powerful show of support, all twelve directors resigned from their jobs in March 2000 and interviewed, if desired, for the new organization's leadership positions. Since there were now only six directorates available, some former directors found themselves in other leadership positions throughout the organization or elsewhere in Navy Medicine (note: some former directors were due to transfer from NNMC as part of normal job rotation and declined personal interview).

Questions and concerns regarding access to data were inevitable during Transformation. Not only was access to data an issue, but questions of data integrity and redundancy of reports provided by the dozens of systems throughout NNMC became a central theme as services struggled to "transform." Many

initiatives at NNMC prior to Transformation were developed to improve data integrity and increase data quality and were crucial to the organization. Data collected and information provided are ultimately used to determine funding for NNMC as well as benchmark NNMC against other MTFs within the Department of Defense (General Frequently Asked Questions, 2000). Personnel descriptions were also affected by the realignment, some requiried minimal change, while still others required total rewrites and if the changes involved civilian personnel, external involvement was necessary (Department of Navy Human Resources Office, for instance). It was in this particular case where information technology began to play a role in settling any doubts in the Transformation.

Not only did the realignment change personnel descriptions, but it also changed names and identification codes for each directorate. The entire organization was relabeled and renumbered. The Transformation affected everyone from front desk personnel who manned the telephones to the command post office who handled incoming mail. Many tasks were now completed via a computer terminal, from entering patient information in Patient Administration to ordering supplies. In terms of manpower management, every staff member had to be reassigned to a "new" service line and in many cases, to a new directorate with appropriate codes. This process was the only way that the

Manpower Management department and the Directorate for Resources could keep track of personnel (also considered "resources") throughout the facility. For instance, Mr. John Doe no longer worked in the former Directorate for Healthcare Operations, because it was now called the Directorate for Managed Care. Ms. Smith could no longer be found in Code 01, Directorate for Administration, because it was now identified as Code 5000. Systems and processes were forced to react quickly to the Transformation in order to continue smooth operations. The steep learning curve affected all levels: staff, volunteers, vendors, and patients. The limited staff for Human Resources, for example, had to ensure within a few months' time that their civilian personnel would be paid on time, because the civilian pay system was directly tied into where the individual worked within the organization according to the code assigned to that location. This particular code was identified with the directorate's code, which had now changed with Transformation. The above scenarios involving the civilian pay system and specific location of personnel throughout NNMC are just two examples of how the information technology service line affected other systems and processes in NNMC.

What can ensure that data entered into the many information systems, such as pay information or patient data, found throughout NNMC is accurate? Data driven decision-making

allows an entire organization to run like a well-oiled machine. Once Transformation was implemented on July 3, 2000, the entire command buzzed with activity in preparation for upcoming inspections by both the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and Medical Inspector General expected in May 2001. The service line leadership teams and command objective teams, such as the Information Technology Objective Team, also busily prepared for the full implementation of a new command annual plan (scheduled for July 3, 2001). ITS had to work with, and at times guide, the rest of the organization to ensure that data entered was accurate and complete.

Why Present Case Studies on Information Technology at NNMC?

Optimal decision-making requires that useful information be made available in a timely manner to all services at all levels. Now that NNMC has moved toward a Common Operating Environment to facilitate efficient access to and flow of information, the information technology and communication service line must be a focal point of strategic planning. The implementation of Transformation required a reevaluation of NNMC's annual plan in order to reflect the current organization's mission and vision. Outside consulting firms were hired to assist in the planning process during several "offsites" over the year. The desire by

the senior leadership to transform NNMC into a High Performance Organization (HPO) required significant changes to both the organization's outward appearance and its overall business processes.

The most significant organizational change involved the creation of service line leadership teams. The Board of Directors looked at the service line (or product line) concept with a critical eye during its annual 2000 offsite. According to Shortell, a product (or service) line is a revenue and cost center with one person in charge of all aspects of the product (service) or group of products (services). In the case of NNMC, the service line concept was adopted with a twist: team leadership under a single team leader vice a single person in charge. Shortell identifies the following key success factors for a product line design:

- a strong management information system that links clinical, financial, and volume data by product
- a strong budgeting-financial system that can disaggregate costs and revenues so that accountability can be appropriately assigned
- reward systems to encourage innovation and risk-taking
- relevant clinical involvement of physicians, nurses, and other health professionals to deal with new technology,

diagnosis and treatment patterns, quality, and patient convenience issues

- a strong support staff, particularly in the areas of marketing, finance, and planning
- the need to align authority and responsibility
- the need for integrative mechanisms that cut across product lines, hence the development of the steering committee
- the need for a concerted management development program that emphasizes the ability to work with more than one manager, communication skills, conflict management skills, computer literacy, and creativity (Shortell, 1994)

Newly created service line leadership teams were invited to attend scheduled three-day seminars to become educated on the Transformation process and to assist in the development of the new strategic, or annual, plan. Strategic planning guidance was provided by the Performance, Evaluation and Improvement office and paid strategic planning consultants. Under the NNMC HPO Business Model, the Board of Directors (BOD) was responsible for NNMC's strategic plan as well as its strategic assessment, while the service line leadership teams were responsible for the creation and implementation of the business area plans and the action plans. Both the BOD and the service line leadership were

responsible for assessing the organization and measuring and reporting both information and analyses.

Organizational Behavior

Several items of interest prompted this researcher to delve deeper into the "myths" surrounding Transformation in an attempt to separate fact from fiction. The weeks following the implementation of Transformation on July 3, 2000 were a time of great change for both staff and patients. Local news reports of "an outside panel appointed by the Navy's top admiral…reviewing operations at the National Naval Medical Center" and obvious congressional interest, particularly from the chair of the House Appropriations Committee, Rep. C.W. "Bill" Young (R-FL) (Defense Health Update, 2000). These same reports stated that the review panel or the "Blue Ribbon Panel" was created when Congressman Young raised concerns about problems at NNMC that may have endangered lives and questioned the quality of patient care. The reports and the creation of the panel came several months after the initial announcement of the need for reorganization at NNMC.

August 2000 was a month that tested NNMC's ability to react to the different negative forces that were coming from all sides: staff (both military and civilian), patients, retirees, "big Navy" (the Chief of Naval Operations) and the surrounding community. Overall staff morale fluctuated in response to

different stories that were printed in local and national papers or seen on the nightly news. Some of these stories had little or nothing to do with Transformation, yet because they occurred during the same time frame and did have an effect on the organization as a whole, it is proper to include them in the case studies surrounding the Transformation as appropriate. Here is a brief sampling of events that occurred during the initial stages of Transformation, each affecting the progress of Transformation in different ways:

- Customer service surveys issued by the Blue Ribbon Panel which was led by a recently retired Rear Admiral Medical Corps officer, hand-selected by the Chief of Naval Operations.
- Confidential staff interviews with individual members of the CNO's Blue Ribbon Panel
- Washington Post and Navy Times news articles regarding the quality of patient care delivered at NNMC
- Focus groups with the Surgeon General and the hospital Commander
- Focus groups with only the hospital Commander
- Weekly Service Line Leadership meetings geared to educate the newly formed leadership teams

Healthcare organizations are beginning to shift from the traditional bureaucratic model to a more flexible, team-based design meant to support knowledge work. The team-based knowledge work model, which holds as its goal the increase of applied knowledge to further the organization's strategic intent, requires changes in several areas of the organization: the design of the organization, leadership's role in the organization, and team and team members' attributes (Weaver, 1999).

The Stress of Change

As Transformation continued full speed ahead during the summer months of 2000, grumbling was heard throughout NNMC. Many staff members took advantage of the confidential interviews that were held with members of the review panel and unleashed their doubts or their support of the Transformation. According to Robbins, changing conditions demand structural changes (Robbins, 1998). NNMC responded to the change in health care delivery and identified market trends by committing to necessary structural changes, in other words, committing to a full-blown Transformation.

A staff psychologist from the Behavioral Healthcare Service Line summed up the feelings of a good number of NNMC personnel when at the October 2000 leadership offsite he stated: "What am

I doing here? Why wasn't I consulted?" Although the command leadership attempted to convey the process of organizational change from the early days of Pre-Transformation, there was still a lot of grumbling about the change, even after the first 100 days had past.

How did the command leadership convey its Transformation message? The command leadership employed several techniques to continuously communicate with staff, patients, customers, visitors and everyone that they came in contact with on a daily basis. The Transformation message was communicated and continuously explained throughout the command, the National Capitol Area, Navy Medicine and the Line Navy through briefings, newspaper and journal articles, brochures, meetings, focus groups and in casual conversation.

Initially, the ITS staff did not appear to be directly affected by the stress of changes throughout the organization during Transformation. The ITS senior leadership, systems staff and most of the network operations staff were housed in Building 12 across the street from the main hospital facility and therefore, geographically separated from the majority of the hospital (see Appendix I). Additionally, in an effort to ensure a smooth transition from the old organizational structure to service lines, the Administration Service Line, which includes ITS, was among the last services to completely transition to

service line leadership teams. ITS personnel did not experience as high levels of stress resulting from Transformation as felt by the other service lines until several months later. The initial stress encountered by ITS personnel resulted from the deluge of service requests initiated by the other service lines. Additional stress was created due to the lack of a defined budget for particular programs that enhanced and supported Transformation efforts such as the command webpage on a secure intranet.

The ITS personnel encountered other challenges during this period of Transformation. Internal challenges to the service line appeared to concentrate on staffing issues. Distance between the different ITS services seemed to contribute to the lack of cohesiveness within the service line. The main ITS leadership (CIO, deputy CIO, service line managers) maintained offices in Building 12 (see Appendix I, Base Map NNMC and Key), giving the hospital leadership greater access and convenience since Buildings 9 and 10 were located across the street and housed the command suite as well as critical patient care areas. The One-Stop Shop, which handles incoming requests for computer, telephone and pager support, was conveniently located within Building 10. The Telemedicine shop was located in Building 9. Network operations was unique in that its staff was split by function as well as locales: network engineers sat in Building

12, but their servers were maintained in the basement of Building 11, across the compound on the other side of the main hospital buildings. The Message Center was located in Building 2, in an area easily missed by passersby. The Communications (telephone) personnel were located in Building 1 and were constantly on foot throughout the main hospital buildings. Consequently, communication between the various areas of ITS appeared to be choppy at best and personnel were sometimes unintentionally left out of events (i.e. luncheons).

In addition to the lack of cohesiveness that arose as a result of geography (different buildings), there were also conflicts that occurred often due to personality issues. The staff mix in ITS included government service employees (many of whom were middle to upper management levels), contract employees, and a small number of military (enlisted and officer ranks). Resentment towards middle management created tension witnessed daily within workspaces. Situations arising from personality conflicts are mentioned within the case study.

Personnel Issues

The question of health care delivery or the lack of quality care at NNMC prompted the leadership to address certain issues immediately, such as personnel issues. Personnel such as nurses and support staff (administrative and clinical) were desperately

needed throughout NNMC. The number of necessary staff may be determined by productivity and efficiency reviews that are technically supported by the information technology service line. In times of limited funding and staffing across the Navy, management cannot simply ask for additional staff without the necessary justification. The use of data driven decision-making tools to increase productivity and efficiency in terms of labor is an essential part of the future of NNMC.

According to the Director of Prevention and Wellness, a goal for NNMC is to achieve more accountability throughout the organization. NNMC as a whole must recognize that decisions should be driven by good data. The biggest portion of Transformation is to realign the organization's structure upon accountability. Now that NNMC is structured along service lines, accountability can be better tracked, lending itself well to good data driven decision-making.

NNMC faces a critical need to gain market share in direct support of the Military Health System (MHS) Optimization Plan. The proper realignment of existing resources to create service lines will expand NNMC's primary care capacity, enhance access, increase productivity and strengthen GME. Savvy use of ITS resources and talent can enhance NNMC's ability to both gather the information necessary for responsible decision making by senior leadership as well as justify requested funding and

support for needed programs and personnel that will push NNMC solidly into the forefront of 21st century military medicine.

The Support Role of Strategic Information Systems

How does ITS support strategic management? According to Ginter, Swayne & Duncan (1998), an information system is a strategic weapon if used to its fullest capability. A strategic information system is "any combination of computers, workstations, software systems, and communications technology used to gain competitive advantage" (Ginter, Swayne & Duncan, 1998). The challenge to leadership is to recognize that where information has a great deal of time value, information systems may lead organizational strategy to develop a competitive advantage. Where traditional information systems focused on improved efficiency, strategic information systems can be used to gain competitive advantage (Ginter, Swayne & Duncan, 1998).

Strategic information systems provide information for situational analysis and development of competitive advantage, information for improved clinical decision making, and information that improves timeliness and accuracy of administrative information. Increased dependency on information systems at every level of the health care organization requires both high cost and time commitment to the rapid changes in information technology. Since information systems affects and

interacts with all levels of a health care organization, understanding how its operational strategies support NNMC's strategic plan is critical to both the success of the information technology service and the entire organization.

The Overall Impact of Information Technology and Information Management

The information technology service line (ITS) was chosen as a general case study due to its overall effects across the entire organization. The information technology industry experienced many fast-paced changes in recent years, demanding the use of annual plans vice long-range strategic plans, in order to respond more effectively to industry dynamics. The senior leadership at NNMC recognized the benefits of an annual plan in its current dynamic health care environment and used the information technology industry as a guide and example during the early days before Transformation implementation.

The American health care industry currently faces many changes. Some of these changes are legislation-driven, such as the Balanced Budget Act of 1987 and the Healthcare Insurance Portability and Accountability Act (HIPAA). Other changes are in response to changing demographics within the American population, such as the demands of an aging population and an increasing interest in prevention and wellness. The development

and implementation of the annual plan, with specific key objectives, is a guide for NNMC to effectively respond to these changes.

The information technology service line has developed its own annual plan that is ideally aligned with NNMC's annual plan. The outgoing CIO provided this annual plan to the IT goal group as the group formalized its annual goals and objectives.

The information technology (IT) goal group eventually developed its own annual plan over the course of several months beginning in November 1999. Its final goal was to incorporate several achievable focus areas into the final NNMC annual plan. The goal group is made up of several interested parties from service lines across the organization, including military and civilian physicians, nurses, information technology personnel, industrial hygiene, and healthcare administrators. This goal group was formed as a result of the late October 1999 offsite.

The initial objective of the IT goal group was to create an annual plan that addresses the following objective: "Our information management and information technology supports optimal decision making."

Suggested Questions

1. Assess ITS' performance and business strategy? How are these likely to change in the future?
2. What should be ITS' strategic direction in relation to NNMC's annual plan? In relation to Navy Medicine?
3. How would you characterize ITS' operating strategy?
4. What are the implications for ITS' basic business risk?
5. What organizational behavior issues are prevalent and how should the problems be appropriately identified and managed?
6. Explain the impact of decision support systems on the provision of direct patient care (clinical decision making).
7. How can a strategic information system be used to develop competitive advantage?
8. Explain how strategic information system changes are also a catalyst for change.
9. What changes are information systems bringing to health care?
10. Why is planning for strategic information systems important?
11. Discuss the impact of strategic information systems on the directional, adaptive, and operational strategies of a health care organization like NNMC.

Conclusion and Recommendations

The overall impact of the Transformation on NNMC and its internal and external customers is still being weighed today. Supporters say the Transformation was a success due to a perceived improvement of customer service and communication throughout the organization. Detractors say that the Transformation is still occurring and now that the current commander will transfer in September 2002, the fear of the unknown has again taken hold of the staff.

Note: The move towards a service line model quickly followed at the other two Naval Medical Centers, Naval Medical Center San Diego and Naval Medical Center Portsmouth, with varying degrees of measurable success. None of the three medical centers look exactly alike in organizational structure.

Hopefully, NNMC's senior leadership has learned from the struggles encountered during the Transformation of 2001 and applies "lessons learned" as they encounter new challenges with a new commander and deputy commander at the helm.

What was the overall impact of the Transformation upon the ITS? ITS today has struggled through significant challenges in its internal and external environments. The current CIO has been leading her charges for over a year now and by most accounts, has been successful. A proposal to move ITS under the Resources service line soon after her arrival at NNMC took

effect in July 2001. This move could be viewed as a significant catalyst for change for ITS. Personal communications with various staff indicate improvements in efficiencies and financial and materiel support to complete tasks, yet morale still fluctuates.

In May 2001, ten months after Transformation officially occurred at NNMC, the current CIO entered a workplace littered with strategic landmines, some easy to see while others were not as obvious. Her reputation as an aggressive go-getter preceded her; some of her employees were skeptical about her abilities as a leader and manager before she arrived. Her rumored lack of technical knowledge and comparably brief information technology/management resume threatened her initial success as NNMC's CIO. There were contracts to develop and maintain, staff issues to contend with and customer service issues to continually address. Shortly after her arrival, her deputy CIO transferred and that particular bank of knowledge was gone. Unfortunately, prior to his transfer, the tension between the two was palpable to the ITS staff. Although they all remained professional and successfully completed tasks, the stress in the working environment threatened staff morale. To her credit, she took several weeks, even months, to learn about her new assignment and her new employees.

She effectively integrated lessons learned from NNMC's other service lines, which had already completely transformed and realigned by her arrival in May 2001. Like her senior leadership at NNMC did the prior year, she also kept her staff in constant communication with her and with each other through weekly meetings that were productive as well as informative. These meetings were a holdover from the previous CIO's tenure, but were especially important during the early days after her arrival since critical first impressions were made at these meetings. Strategies were developed at these staff meetings and full participation was encouraged for all involved. Transformation was an opportunity for ITS to improve itself; it needed increased resources (web page, telecommunications, people, equipment) to support the Transformation.

Recommendations to the current CIO include maintaining communications with internal and external customers while at the same time, ensuring that the ITS annual plan remains aligned with NNMC's strategic and annual plans. She must also ensure that ITS keeps up to date with technological advances and with administrative and technological changes in Navy Medicine and with the Department of Defense. Her staff must also keep themselves current through continuing education and certification. In keeping up with the times, ITS can continue to provide necessary support services to all of NNMC.

Appendix A

Methods and Procedures

This Graduate Management Project (GMP) is a case study analysis of NNMC's information technology service line by the assigned administrative resident for the year 2000-2001. After consultation between Baylor University faculty members and the resident, the preferred format for the GMP is a general case study of the ITS line at the strategic level with additional general information regarding NNMC's 1999 Transformation to enhance reader understanding of the environment during this time period.

Data for the GMP were obtained from literature review; interviews with various NNMC staff members; and personal observation and participation at NNMC by the resident.

Appendix B

Old NNMC Organizational Structure (by Directorate)

Commander
Deputy Commander

Chief of Clinical Staff
Directorate for Hospital Administration
Directorate for Medical Services
Directorate for Surgical Services
Directorate for Clinical Support Services
Directorate for Nursing Services
Directorate for Occupational and Community Health
Directorate for Healthcare Operations
Directorate for Resources Management
Directorate for Pastoral Care Services

Appendix C
New NNMC Organization Structure

COMMANDER
DEPUTY COMMANDER

(Special Assistants:)

Command Master Chief	Chief of Clinical Staff	Chief of Nursing Staff	Safety Dept	Commanding Officer, USNS Comfort	Performance Evaluation and Improvement
Command Ombudsman	Clinical Research Service	EEO Specialist	Staff Judge Advocate	Chief of Staff for Optimization	Office of Command Inspection and Management Control
	Professional Affairs Dept	Public Affairs	Pastoral Care	Manager, American Red Cross	Manager, Navy-Marine Corps Relief Society

PREVENTION & WELLNESS	RESTORATIVE CARE	CLINICAL SUPPORT	MANAGED CARE	RESOURCES	ADMINISTRATION
Primary Care Service	**Cardiovascular & Critical Care Service**	**Blood Bank Service**	**Customer Service**	**Budget Service**	**Administration Service**
Branch Clinics • Primary Care • Industrial Hygiene • Occupational Medicine	Cardiac Cath Lab	Apheresis	Customer Service Coordinator	**Fiscal Service**	Admin. Services
Emergency Room	Cardiology	Blood Donor Center	Patient Relations	Payroll	CDO Desk
Primary Care Family Health Center	Cardiothoracic Surgery	Transfusion	Protocol	**Medical Accounts Service**	Manpower Management
Primary Care Internal Medicine Clinic • Ambulatory Medicine • Inpatient Medicine	CCU/ICU	**Nutrition Management Service**	Beneficiary Services	Collection Agent	Public Safety Security
Health Promotions	Critical Care Medicine/ICU	Clinical Nutrition	Marketing	Inpatient TPC	Staff Ed & Training
Women's & Children's Health Services	Inpatient Cardiology/CT Surgery	Food Management	**TRICARE Business Service**	Outpatient TPC	**Commercial Services**
Breast Care Center	**Musculoskeletal Service**	**Laboratory Service**	TRICARE COTR	Third Party Liability	Main Street
Pediatrics • Adolescent Medicine • Ambulatory Pediatrics • Specialty Pediatrics • AFCCP • EDIS	Chiropractic Occupational Therapy	Anatomic Pathology	TRICARE Plans and Operations	**Performance Analysis & Reporting**	Exchange
MICC (Mother Infant Child Care)	Orthopedics	Clinical Pathology	TRICARE Business Office	Performance Reporting	Navy Lodge

New Organizational Structure for NNMC (continued)

PREVENTION & WELLNESS	RESTORATIVE CARE	CLINICAL SUPPORT	MANAGED CARE	RESOURCES	ADMINISTRATION
Women's & Children's Health Services (continued)	**Musculoskeletal Service (continued)**			**Performance Analysis & Reporting (continued)**	**Commercial Services (continued)**
Neonatology	Physical Medicine & Rehabilitation	**Navy Central HIV Service**	**Clinical Mgmt. Svc.**	Analysis & Evaluation	Package Store
OB/GYN	Physical Therapy	Informetrics	Utilization Management	**Plans, Analysis & Evaluation Service**	**Contingency Service**
Procedural Specialty Services	Podiatry	Serodiagnostic	Case Management		Readiness
Dermatology	Rheumatology	System Support			RLO (Reserve Liaison Office)
Gastroenterology	**Neurosciences Service**	**Pharmacy Service**			**Facilities Management Service**
Pulmonary Medicine • Respiratory Therapy	Neurology	Inpatient Pharmacy			Base Engineering
Disease Management Service	Neurosurgery	Outpatient Pharmacy			Environment Programs
Allergy/Immunology	**Oncology Service**	Clinical Management			Fire Department
Endocrinology	Hematology/ Oncology	Logistics			Hospital Engineering
IDSI	Inpatient Oncology	**Radiology Service**			Planning & Transportation
Infectious Disease	**Operative Care Service**	Diagnostic Radiology			**Information Technology Service**
Nephrology	Ambulatory Surgery Center	Neuroradiology			Communications
Optometry	Anesthesia	Interventional Radiology			Information Management
Behavioral Healthcare Service	Main OR	Nuclear Medicine			Information Technology
Adult Ambulatory Behavioral Healthcare	PACU	Physics and Radiation Safety			Telemedicine
Child & Adolescent Behavioral Healthcare	Preoperative	Radiation Oncology			**Logistics Service**
Primary Behavioral Healthcare	Short Stay Unit				Acquisition Management
CAC/DAPA	Sterile Processing				Contract Management
	Surgery Service				Equipment Management
	General Surgery				Material Management
	Inpatient Surgery				Postal Operations
	Ophthalmology				**Operations Service**
	Oral & Maxillo-facial/Dental				Bachelor Housing
	Otolaryngology				Fisher Houses
	Plastic Surgery				MWR
	Vascular Surgery				Child Development Ctr.
	Urology				**Patient Admin. Svc.**
					Records Management
					WRAMC Liaison

					Medical Boards
					Decedent Affairs

Appendix D

Transforming National Naval Medical Center

31 Mar 2000 (Statement/point paper by the Commander, National Naval Medical Center)

PURPOSE: To clarify the initiative to transform national Naval Medical Center (NNMC) and outline the realignment of resources to improve access, expand Primary Care capacity, create coordinated specialty Service Lines, strengthen Graduate Medical Education (GME) programs, and enhance patient service.

BACKGROUND: NNMC was founded as a tertiary care facility to treat the sick and injured from World War II. Over the years NNMC has enjoyed a renowned reputation as an institution providing state-of-the-art medical care. However, throughout America, health care quality is now being defined in terms of access and customer service. A recent analysis of NNMC revealed opportunities for the medical center to improve primary care delivery and to more effectively coordinate specialty care services with referring providers. This optimization would increase referrals to the medical center and strengthen GME programs.

DISCUSSION: American health care is shifting its priorities from treatment of illnesses and injuries to disease prevention. Accordingly, NNMC needs to place increased emphasis on wellness-based primary care. Improving access to primary care, aligning resources to build clinical service lines, and delivering a coordinated benefit will allow NNMC to refine its reputation as an integrated health care delivery system characterized by outstanding customer service.

Medical leaders from NNMC have embarked on a course of transformation designed to expand primary care, increase the effectiveness of clinical specialty service lines, and strengthen medical education programs. These changes will be implemented by focusing clinical services into two directorates: a Directorate for Prevention and Wellness and a Directorate for Restorative Care. The Directorate for Prevention and Wellness will be organized and resourced to support increasing access to the TRICARE Prime health care benefit. Additionally, the Directorate will be structured to align selected specialties to optimally maintain the health of those afflicted by disease and to highlight NNMC's success in the field of women's health. The Directorate for Restorative Care will be resourced to support a competitive market advantage in specialty service lines devoted to cardiovascular diseases, cancer, neurosciences, and musculoskeletal ailments. The re-alignment of specialty services will improve the coordination of treatment for patients with complicated illnesses and enhance NNMC's already notable distinction as a center for excellence in these clinical areas.

These changes will streamline decision-making and allow better utilization of personnel resources, leading to increased efficiency and optimized health care costs. By increasing access to primary care and focusing on selected clinical service lines, the medical center's educational programs will be strengthened, thereby ensuring all military medical providers are fully prepared to fulfill their operational responsibilities.

Organizational change is always difficult. NNMC's transformation will undoubtedly encounter challenges, as there is a shift from the established priorities and practices to new and different routines. Although these changes may be temporarily unsettling, similar changes have improved the delivery of care in a variety of settings, including the Veteran's Administration Health Care System; the Greenville Hospital System in Greenville, South Carolina; the York Health Care System in York, Pennsylvania; and Camp Pendleton Naval Hospital.

RECOMMENDATION: For information only. Additional information briefings will be readily provided upon request.

/S/
K. L. MARTIN
RDML, NC, USN
Commander, National Naval Medical Center

Appendix E

SWOT ANALYSIS PROCESS

(Presented to Service Line Leadership Team at October 2000 Offsite)
The BOD members and Associate Directors reviewed current materials relating to the world around us. Magazines such as Futurist, Harvard Business, Wall Street Journal, and Fast Company were provided for review and ideas were generated. Each group reviewed all others ideas. Small groups were then provided with HealthCare literature to review and identify issues and trends in the Health Care Industry. All this information was used to support the environment assessment for the command. The BOD was organized into small groups and began capturing ideas for the SWOT analysis. Each group provided input for the strengths and weaknesses of the internal environment. The external environment was also captured identifying opportunities and threats. The entire group dialogued on the input. The information was synthesized into statements.

Opportunity Statements:

- Quality of Life: Improved Quality of Life would lead to enhanced professional opportunities, comfortable work and living environment, professional recognition (awards, incentives) retention and NNMC as the Premier duty station of choice.
- Optimization: Optimizing our resources (people, $, space, and support) will lead to expanded enrollment opportunities, team productivity, improved patient care delivery, increased patient satisfaction and strengthen GME.
- Customer Service: Satellite clinics offer improved access, increased enrollment, professional opportunities and reduced crowding at NNMC.
- Access to Care: Expanding access to care would ultimately improve patient satisfaction.
- Best Clinical Practice: Evidence based medicine will improve outcome and avoid waste.
- Partnership—partnering with outside agencies, facilities, and special interest groups would lead to a positive NNMC image and augment optimization efforts and develop ambassadors for NNMC and Navy medicine and strengthen GME
- Efficient Deployment Readiness—Will allow sustainment of key deployment competencies while minimizing impact on clinical operations to the maximum extent possible.
- Data Quality—Leading Navy Medicine in data quality and integrity leads to increased resources and a competitive edge.
- Maximize use of technology—will improve efficiency, expand access, improve QOL and enhance stewardship of resources.

Statements Capturing Weaknesses:

- Access to care is negatively affected by: phone appt system; lack of 24/7 appointments; decreased number of exam rooms; not an adequate number of support staff; no identified PCMs or lack of "PCM philosophy"; few satellite clinics; and parking.
- NNMC suffers from significant IM/IT shortfalls: deficient IT LAN; lack of connectivity with branch clinics; ineffective information management; insufficient internal communications; not reliable performance reports.

- The achievement of clinical/professional excellence at NNMC is hampered by our aging facility; a 70's era layout, and declining Branch clinic facilities.
- Staff effectiveness is negatively affected: by a misallocation of resources associated training, difficulties in hiring civilian personnel and recognition of staff members civilian and military and lack of clarity of Chain of Command; lack of direction; and input to change process.
- There is a perception that NNMC does not consistently deliver "customer-focused", or good customer service.
- High performance is hampered by lack of business savvy; unsophisticated tri-service accounting practices; cost of contacts; lack of financial incentives to see more patients, lack of coding.
- Staff experience decreased regarding Quality of Life due to "call/watch/living" conditions, high cost of living, insufficient/ineffective communications, and personnel programs.
- Present transformation effect: unhappy Program Directors; confusion; Chain of Command??, perceived decrease in power, control, trust.

Statements Identifying Strengths:

- NNMC has a professional staff instilled with Navy Core Values.
- NNMC is an attractive campus conveniently located for easy access.
- NNMC has a direct, clearly defined and supported readiness mission.
- NNMC is a national icon.
- GME is a pillar of strength at NNMC.
- NNMC staff members have access to key decision makers.
- Providers at NNMC routinely collaborate with their professional colleagues to assure highest quality care and best possible outcomes for their patients.

Statements Capturing Threats:

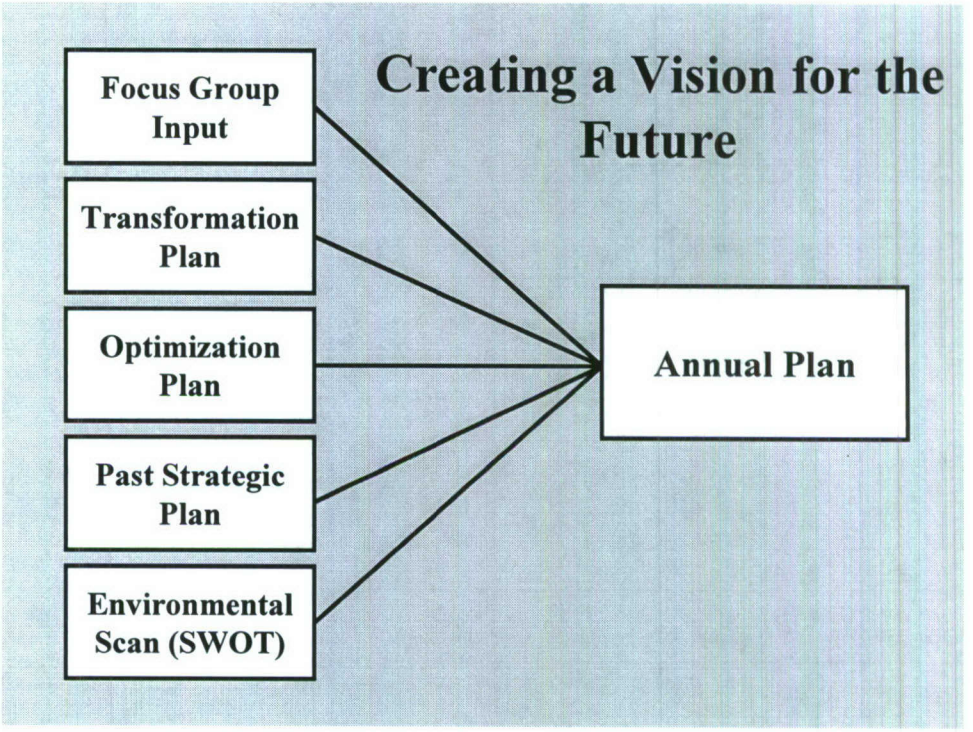
- The local healthcare market offers compensation and other incentives, which far exceed what NNMC can offer to physicians (especially procedural specialists) and technicians.
- Inflexible TRICARE benefit precludes most innovations in healthcare delivery.
- Managed care and indemnity plans continue to provide attractive, (accessible, local, customer focused) affordable alternatives to all categories of TRICARE. We are also at risk of losing current patients and personnel. (Opportunity—satellite)
- Accelerated losses are not easily replaced or maintained with current accession programs.
- Flawed TRICARE implementation continues to compromise the program credibility and effectiveness. This includes PCMBN, single CHCS host, CHCS II, TRICARE 3.0, and revised financing/enrollment based capitation.
- PCMBN/Enrollment Capacity—appropriate business rules (implemented/sustained) adequate support staff—current number leads to frustration.
- Uncertainty of clinical quality standards, outcomes, and total costs (marginal/direct) place COE at risk.
- Expanded beneficiary choice and outsourcing opportunities threaten NNMC Service Lines.
- Lack of defined core business/mission/vision of NNMC threatens institutional prestige, ability to prioritize resources and excel.

- Financial incentives are mismatched with population health.
- Pressure to optimize claimancy resources will decrement NNMC further unless enrollment is increased and efficiency improved.
- Direct marketing will continue to drive pharmacy spending increases well above the rate of inflation. Shifts in spending to cover pharmacy shortfalls compromise other vital programs. (Opportunity—wellness, best clinical)
- MHS deployment of IM/IT lags behind the corporate world.
- ACGME (American Colleges of General Medical Education) is reducing programs.

Key Strategic Issues

Access
Info Mgt (data)
Partnerships (GME)
Customer Focus
Optimization
Staff Focus/QOL/Professional Development
Readiness Optimization
Marketing (market research, advertising, etc.)
GME

Appendix F
Supplemental References



Appendix G
National Naval Medical Center
Student Case Study

Information Technology Service Line at the National Naval Medical Center

The information technology service line was selected as a case study due to its broad influence across the National Naval Medical Center (NNMC). The military health care system experienced several significant changes in recent years, stemming from a varied combination of influences including: a dynamic information technology industry, a changing scope of practice towards prevention and wellness, and increasing governmental involvement in military medical health care issues. These influences have led to the use of annual plans in addition to long-range strategic plans in order to respond more effectively to industry dynamics.

The American health care industry currently faces many changes that surround health care delivery. Some of these changes are legislation-driven, such as the Balanced Budget Act of 1987 and the Healthcare Insurance Portability and Accountability Act. Other changes are in response to the changing demographics of the American population, such as the demands of an aging population and increasing interest in prevention and wellness. The information technology industry also experienced several significant changes in recent years, demanding the use of annual plans vice long-range strategic plans, in order to respond more effectively to industry dynamics.

Recognizing the long-term benefits of annual plans, the leadership at NNMC adopted the use of annual plans in addition to long-term strategic planning. The development and implementation of the annual plan, with specific key objectives, is a guiding force for NNMC.

The information technology (IT) objective team was instructed by higher leadership to develop its own annual plan with a final goal to incorporate several achievable focus areas into the final NNMC annual plan. The objective team members include several interested parties from service lines across the organization, including military and civilian physicians, nurses, information technology personnel, industrial hygiene, and healthcare administrators. This team formed as a result of the late October 2000 strategic planning offsite. The initial goal of the IT objective team is to create an annual plan that addresses the following objective: "Our information management and information technology supports optimal decision making." As a middle management-level body, according to the NNMC Strategic Plan, team members are responsible for identifying, developing and recommending the strategic direction, timelines, and specific tasks and resources necessary for success within the organizational structure and chain of command at NNMC. (NNMC Strategic Plan) The objective team is also charged by the board of directors to deliver, within a specified timeline, a detailed action plan that outlines the strategy, identifies the key outcomes, challenges and barriers to successful execution of its assigned objectives.

Graduate resident Melody Peale prepared this case under the supervision of Associate Professors Daniel Dominguez and Richard Thorp as the basis for class discussion rather than to illustrate either effective or ineffective handling of management situations.

This case study discusses several situations that occurred over a three-year period from about June 1998 through May 2001, with the majority of strategic situations occurring within the last eighteen months. Readers should note that a general background of IT applications within healthcare, NNMC Bethesda, and specifically, its recent transformation, is provided to give a sense of the overall situation at the facility that may or may not have affected the information technology service line. It is up to the reader to glean the necessary information from the provided narrative to make the appropriate situation analysis. The reader should also note that the case study occurred within an organization responding to massive organizational change.

Information Technology Woven Throughout Healthcare

A brief historical overview of information technology (IT) within the general healthcare industry and specifically the military health care system is both appropriate and necessary. IT is found woven throughout the healthcare industry. The intelligent use of information requires systematic planning and management of information resources in order to develop information systems that support patient care, administrative operations, and strategic management (Austin and Boxerman). Health information systems fall into the following four general categories:

1. **Clinical systems** that support patient care and provide information for strategic planning and management.
2. **Administrative systems** that support non-patient care activities. Non-patient activities found at NNMC include:
    - financial management systems (i.e. EAS III)
    - human resource management systems (i.e. MEPRS)
    - materials management systems (i.e. DMLSS, a supply ordering system)
    - office automation (i.e. command-wide adoption of a Common Operating Environment such as Microsoft Windows operating system and Office Suite)
3. **Strategic decision-support systems** that assist the board of directors (BOD) in planning, marketing, management control of operations, performance evaluation, and outcomes assessment. NNMC's BOD uses information culled from various administrative systems in order to make "big-picture" decisions such as capital equipment purchases and long-range construction planning. Some of the decision-making information comes from systems found within NNMC, while additional information is gleaned from other sources such as the Department of Defense Health Affairs information systems.
4. **Electronic network applications** such as those that are used for insurance billing and claims processing, ordering medical supplies, and exchanging information across provider networks. Since the military healthcare system (MHS) has implemented TRICARE that enabled beneficiaries to seek medical care from civilian providers outside the military treatment facilities, secure electronic exchange of patient information has recently been of high interest to many parties, including key government officials and political parties. Electronic network applications are also used on a regular basis to order non-medical supplies (office supplies).

Many of the recent changes found within the healthcare industry resulted from a chain of events that included the following: (Austin and Boxerman)

- Societal demands for performance report cards on health plans, health care systems, and providers
- Changes in reimbursement
- Outcomes assessment with a goal to improve quality and reduce costs

- Expansion of managed care, which has even expanded into the military healthcare system

These forces have resulted in a kind of reformation within the healthcare industry's information systems. Healthcare organizations, military healthcare notwithstanding, recognize the need to develop new initiatives. One such initiative is the development of the computerized patient record or CPR. The CPR has received both accolades and criticisms. Detractors of the CPR fear that senders of private medical information risk non-secure travel along the Internet waves. Supporters see the CPR as another tool to increase access to patient care while decreasing the overall cost of the care. The move towards a paperless healthcare industry is also seen as a definite positive result of the CPR. Providers will be able to "see" their patients' medical records in a virtual instant and will also be able to electronically send diagnoses and evaluations to third party billing agencies, cutting back on the time used to file and send paperwork and ideally decreasing the length of time to resolve billing issues. The overall cost per patient per provider would decrease with the successful development and application of the CPR.

An additional result of these environment forces is the apparent shift in emphasis from inpatient to ambulatory care systems. NNMC Bethesda, indeed all of military medicine, has witnessed the decline of inpatient care. The average NNMC patient is seen for prevention and wellness care or for the treatment of chronic ailments. How does IT tie into direct patient care? Basically, IT is a major support player in healthcare. Various IT systems and software programs enable providers to look up pertinent medical history such as past appointments, treatments, and medication history, information especially valuable in the cases of multiple chronic ailments with several providers across the healthcare system.

Take the following hypothetical scenario into consideration: Patient X receives a physician referral to Internal Medicine Clinic after an Emergency Room visit from the previous night. The internal medicine physician can look up the following medical information from the Consolidated Health Care System (CHCS) database: Patient X's radiology or laboratory results, medications previously administered, and prescriptions ordered. NNMC Bethesda has also recently entered into agreement with the other two large military treatment facilities (MTF), Walter Reed Army Medical Center and Malcolm Grow Air Force Medical Center, to consolidate CHCS databases into what is dubbed "1CHCS," not to be confused with the next generation of CHCS, called "CHCSII." (At the time of this writing, CHCS1 was in the midst of implementation and CHCSII was still on the drawing board.) The implementation of 1CHCS would allow providers who treat patients at more than one MTF (such as residents sent to other MTFs or clinics within the Consortium) to access CHCS patient information from the area MTFs.

In addition to easier access to patient information, there are tremendous strategic applications of "big picture" concepts such as database consolidation and decision-support systems throughout the vast military healthcare system that allow for risk analysis, benchmarking, financial forecasting, outcomes assessment and quality improvement.

Upcoming Trends within Healthcare Information Technology

According to a May 2000 article by Mark Hagland in Health Informatics, entitled "The Many Hats of a CIO", the role of the CIO is continually changing in response to environmental influences. The following is an excerpt from the article consolidated with specific examples from NNMC's IT services:

1. E-commerce and e-health: The CIO role is becoming more consultative vice managerial. The CIO is no longer the organization's chief purchaser of cutting edge hardware and software. CIOs are becoming chief technology solutions strategists as a result of self-development and codevelopment of Web-based and multimedia solutions. Recent years have seen a highly sophisticated webpage accessible by the public and an Intranet with

secure connections for internal users. ITS' web development team, in conjunction with the Managed Care Services' marketing service line, has been busy in the past year creating a certain brand (look and feel). *(Note: ITS did not have devoted funds towards e-health initiatives such as web page development or telemedicine at the time of this writing.)*

2. Chief Technology Officers (CTO): The industry has seen the development of a chief technology officer who reports to the CIO. The CTO's general focus is on technology, allowing the CIO to focus more on strategy. Recent leadership reorganization within the IT services at NNMC does not reflect a specific position of CTO; rather its functions are found incorporated within the deputy CIO's position.
3. Business-service format: CIOs no longer operate out of the older, less-consultative, service-maintenance school, opting for tactical response to strategic business initiatives determined by senior management. This is evident in the current NNMC CIO's dual position as a special assistant to the Board of Directors and service line leader, Information Technology Services. Her role as a special assistant allows her direct access to the BOD.
4. Outsourcing: NNMC accomplishes effective outsourcing specifically in the realm of computer education such as MS Project and Access.
5. Strategic planning: Higher level strategic planning across all IT activities results from the need to make rapid progress in improving cost-effectiveness and clinical care management and to tackle broad, data-intensive initiatives. The recent NNMC Transformation came about as a result of the old BOD's research of IT companies' strategies within a fast-paced dynamic environment. NNMC wanted to borrow some of the strategies employed by these companies and utilized them during the Transformation.

The General Role of a Chief Information Officer in a Healthcare Setting

The responsibility of leading the charge into a changing IT environment within a healthcare setting lies mainly in the hands of the chief information officer. Sometimes the CIO is a civilian government employee, but often times, within Navy Medicine, the CIO is a military officer charged with the daunting dual tasks of IT caretaker and IT strategist for a brief two to three year period.

A Brief Tale of the History of National Naval Medical Center

NNMC Bethesda was originally founded as a tertiary care facility in 1942 for World War II sick and injured. The original medical center was comprised of the naval hospital, the Naval Medical School of Health Sciences Education and Training (now the Naval School of Health Sciences), the Naval Medical Research Institute (now the Naval Medical Research Center), and the Naval Dental School (now the National Naval Dental Center). Its original role and scope expanded over the years to adapt to changing health care needs and new medical technology. The NNMC campus is host to the tenant commands listed above as well as the following: the Uniformed Services University of Health Sciences (USUHS), the Armed Forces Radiological Research Institute (AFRRI), the Naval Medical Information Management Center (NMIMC), and is a partner in studies with the National Cancer Institute (NCI) and other esteemed research foundations.

The physical structure of the NNMC campus has changed dramatically over the years as buildings were added to the iconic and historical nineteen-floor building commonly known as "the Tower." When patient safety and care became a concern, the clinics and wards were moved into modern facilities during the late 1970s and 1980s. The Tower now houses the Dental School and Command and administrative spaces for NNMC as well as several tenant

commands. Former barracks were also refurbished over the past two decades to provide much-needed office space for the growing medical center.

The Competition

Although NNMC Bethesda had historically received a steady stream of referral care from outside the Washington DC Beltway, the implementation of TRICARE severely impacted specialty services. Recent years have forced NNMC to think outside the box and join forces with area medical treatment facilities in order to provide top-notch specialty training for its graduate medical education programs through what is commonly called the National Capital Healthcare Consortium, or the "Consortium". NNMC currently has residency assignments at several Beltway facilities, notably Walter Reed Army Medical Center (WRAMC) and Malcolm Grow Air Force Medical Center (MGAFMC), located on Andrews Air Force Base.

Walter Reed Army Medical Center, with its location a mere six miles east of the NNMC campus in northeast Washington DC, provides a bone of contention for lawmakers and military leadership. The perpetual discussion surrounds not only the proximity of NNMC and WRAMC, but also the redundancy of specialty services. Recent years have seemingly solved redundancy, at least temporarily, in that there are joint agreements between the two area powerhouses in areas such as neurology and obstetrics. For instance, all obstetrics goes through NNMC Bethesda, vice WRAMC. (The exception is that MGAFMC also provides delivery services.) WRAMC provides inpatient pediatric care; NNMC provides outpatient pediatric care. WRAMC provides all major neurosurgery; NNMC provides outpatient neurosciences care.

WRAMC has mastered the ability to funnel from branch medical clinics surrounding the Washington DC area. The early 1990s was a time for growth in the region for the Walter Reed Health Care System. WRAMC was the center of the system. Surrounding it, conceptually, was a complicated system strategically located in pockets of potential growth in the Washington DC area. Ft. Meade's Kimbrough Army Community Hospital was located to the northeast, capturing the eligible beneficiary population between Washington DC and the greater Baltimore area. Ft. Belvoir's DeWitt Army Community Hospital was strategically located just south of the Washington DC border in Northern Virginia. The Walter Reed Health Care System also included other strategically located clinics such as the Pentagon's DiLorenzo clinic, Ft. Myers clinic, and Ft. McNair clinic. Its community hospitals had direct responsibility over outlying area clinics, such as Carlisle Barracks in Carlisle, Pennsylvania and Aberdeen Proving Ground in Aberdeen, Maryland.

The location of some of its community hospitals within Walter Reed Health Care System enabled Walter Reed Medical Center to capture referrals from areas as far south as Quantico Marine Corps Base. Although NNMC Bethesda had direct responsibility over the Quantico Branch Medical Clinic and even provided staff and computer support, Quantico's primary care providers were more likely to funnel referrals to nearby DeWitt ACH vice NNMC Bethesda, located over fifty miles away.

In addition to the decreased patient flow from Marines and their dependents, a good number of military personnel and their families were moving to military housing areas on Bolling or Andrews Air Force Bases or in Woodbridge military housing. An increasing number were also moving to more affordable family-friendly areas of northern Virginia, including Fairfax County, Woodbridge and Stafford. These families were more likely to enroll for TRICARE services at the military clinics near their homes. These outlying clinics, most of which were "owned" by the Army, provided a direct and steady patient flow into the Walter Reed Health Care System.

Malcolm Grow Air Force Medical Center (MGAFMC) on the other hand did not provide as significant a threat to patient flow into NNMC as WRAMC. Its location on Andrews Air Force Base on the "other side" of the Beltway from both NNMC and WRAMC seemed to provide

enough of a buffer in the competition for enrolling eligible beneficiaries. The major competition for defense health care dollars and support remained, as in football, Army vs. Navy.

The Current Organization: Why Transform?

The current facility, NNMC, has a 242-bed operating capacity and employs approximately 3,500 employees (military and civilian). NNMC is an acute care facility which provides a continuum of inpatient and outpatient care to military beneficiaries in the National Capital Area. NNMC also receives worldwide referrals. The beneficiary population is composed of active duty service members and their dependents, and retired service members and their dependents. According to the NNMC Public Affairs Office, several significant trends were noted in recent years that contributed to the need for a complete reorganization. An upward trend was noted for outpatient operations (same-day surgeries) from 5,800 outpatient operations in 1997 to a projected 13,000 outpatient operations in 2000 while the number of inpatient operations decreased from 17,300 in 1993 to a projected 9,400 in 2000 (note: NNMC began collecting outpatient operations data in 1997). This trend which is also found elsewhere in the military health care system mirrors overall changes found in civilian health care delivery: decreasing inpatient bed days in order to decrease overall health care costs, a shift to a prevention and wellness focus, and other significant managed care influences. Readers should also note that although the number of inpatients treated at NNMC decreased from 17,300 in 1993 to a projected 9,400 in 2000, the number of outpatients (including outpatient operations and clinic appointments) treated at NNMC has decreased from 674,000 in 1993 to a projected 600,000 in 2000. The decreasing number of both inpatient and outpatient populations treated at NNMC contributed to the growing need for a reorganization of services at NNMC (E. Austin, personal communication, November 1, 2000).

Prior to TRICARE, NNMC enjoyed decades with little to no competition as a tertiary care, multi-specialty academic medical center with an inpatient focus. NNMC was a disease-focused system with a worldwide referral network. A 1999 environmental assessment pointed out that NNMC was having a difficult time responding to the changing health care environment. The following is a brief list identified by the assessment (Leadership briefing, May 2001):

- Low primary care enrollment (TRICARE enrollment)
- Declining market share
- No competitive market advantage
- High cost per work unit
- Unpredictable GME patient volume

In addition to the identified weaknesses in NNMC's environmental self-assessment, NNMC leadership realized that they could not respond to the Military Health System's Optimization challenges due to its fragmented service delivery, uncoordinated care, and unresponsive systems, processes and schedules. NNMC leadership realized that "if (they) continue to do what (they) always did, (they) will always get what (they) always got" (Leadership briefing, May 2001).

A "Transformation"-al mood takes hold of NNMC...

The current commanding officer was challenged by the Surgeon General on the day of her change of command ceremony to improve enrollment and prove NNMC's financial viability. The Surgeon General's challenge was no easy task for a major medical treatment facility located in a catchment area full of competitors within a strong managed care arena. NNMC's admiral took this as a great opportunity for NNMC to be better than ever. She realized that if

NNMC continued down the same road, NNMC would eventually be ill prepared to face future challenges in the military healthcare industry, especially against competitors such as Walter Reed Army Health Care System and private practitioners. The first step, according to the admiral, was to lay down a foundation, show that NNMC leadership had a viable strategic plan and get all 3,300 individuals attached to NNMC "on board" overnight.

The Board of Directors was tasked with the creation of the plan shortly after the November 1999 change of command ceremony. The end result was a totally stripped down version of the original infrastructure. The leadership hired consultants to assist in developing a feasible plan that would bring about the formation of a high performance organization, to include a complete change to service lines from the traditional stovepipe chain of command that was the standard of many naval healthcare facilities (see Exhibits 9 and 10). Initial changes occurred at the top-most level of the organization in early spring 2000 as each board member resigned from their positions and, if desired, interviewed for positions in the new organization.

The admiral used every available means to inform her command of the upcoming changes, each time emphasizing the importance of teamwork prior to the official Transformation on July 3, 2000. That date was significant because every part of the organization would be "transformed" to the service line concept on that day. In an effort to garner and maintain support from the staff and the customers, she wrote periodic updates that could be found on the command intranet and the base newspaper, The Journal. Her desire to continually communicate with all levels of the command was in keeping with William Bridges' recommendations to "tell people what is afoot and then tell them when they can expect to hear the next installment...don't let communications cease. People abhor a communications vacuum." Bridges' bestseller Managing Transitions: Making the Most of Change was required reading for the new board of directors. Copies of this book were eventually passed down to the service line leadership teams as "recommended reading" during the early days of Transformation.

The staff of the Information Technology Service spent many hours during this pre-Transformation period assisting the other services as they "transformed." The formal role of ITS during the early transition period was mainly in a supporting role. Its critical and strategic importance was momentarily shadowed by the big Transformation until the October strategic planning conference scheduled after the first 100 days of Transformation.

Highlights of the October Strategic Planning Conference

The following questions were asked of the admiral during the first day's "warm up" of a three-day strategic planning conference held in October 2001:

1. *How can we do all these goals—be the President's Hospital—with less?* The admiral's response: "Our goal is to be the President's Hospital, our nation's leaders. We have the power of advertising. We can say NNMC: The President's Hospital. We need to get out there and market our service lines. We haven't really advertised the care we give our nation's leaders." This resident observed that rumors abound that providers at our main competitor, Walter Reed Army Medical Center (WRAMC), unabashedly mention "necessary wants/desires" to the political leaders who grace its hallways for medical care. For instance, during an episode of care, the topic of a desired expensive item might arise, such as a multimillion dollar magnetic resonance imaging (MRI) machine might peak the interest of a particular Senator or Congressman. The end result could be appropriated funding specifically for WRAMC. Our political leaders grace both the hallways of NNMC and WRAMC for their care, although the personal treatment of these "special guests" differs greatly. It is the opinion of this resident took a personal tour of

"Ward 72", an unmarked yet very secure area of WRAMC that is reserved exclusively for foreign dignitaries and our nation's leaders, political and military. The level of personal service at WRAMC for these individuals is comparable to VIP treatment outside the healthcare arena. NNMC does not offer the same level of personal service in favor of the same level of high quality healthcare delivery that every NNMC patient is entitled to receive. No more, no less.

2. *What can service line leaders do to get individuals to get past the vulnerability stage of change management and get to the commitment stage?* Admiral: We're here to get to the sailor who asks: "What is this going to do for me?" Does this annual plan answer "What's in it for me?" Each service line struggled during its initial attempts to align itself with the annual plan. Each goal group struggled to maintain the initial momentum that gathered as a part of Transformation, while keeping its focus on the patients. As the months after Transformation wore on, the realization that a combined JCAHO survey and Medical Inspector General inspection were due in the spring of 2001 tempted many within NNMC to abandon the Transformation goals in favor of JCAHO. Some personnel initially did not realize that the goals of Transformation would benefit the JCAHO/Medical Inspector General survey preparation.

In brief, the large leadership group that included the board of directors (BOD), special assistants and the service line leadership teams (SLLT) spent the first day of the 3-day offsite discussing the general goals of the offsite and providing a brief background of the results of a recent BOD offsite held in preparation for this large group's offsite. The deputy commander gave a brief presentation to the group that explained the BOD's goals for the group in attendance. He explained that at a previous BOD offsite earlier in the month, the BOD took the current strategic plan and conducted a SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis. Specific "big-picture" goals were developed as a result of the SWOT analysis: Transformation and Optimization goals. These two goals were to "become part of the process and things that (you) want to take into consideration...the way we get from here to there (strategic plan)." (Deputy Commander, NNMC) The SWOT analysis also allowed the BOD to focus on the following key strategic issues:

- Access
- Information management
- Partnerships and ways to enhance GME
- Customer focused care
- Staff focus
- Readiness optimization and supporting "big Navy"
- Marketing
- GME

A brief discussion ensued in the crowd regarding the above list of key strategic issues. This particular discussion lasted most of the morning session. When asked why the political situation in the Washington DC area was not included when it was perceived by some in the crowd as a threat, the deputy stated the BOD's opinion that the political arena should be captured as a strength rather than as a threat. An additional perceived threat noted by members in the audience was NNMC's continual lack of funding compared to competitor WRAMC. Additional questions and comments arose from the crowd such as:

- "Were the relationships with other area MTFs considered? (yes)"
- There is a perceived lack of commitment from the Department of the Navy and from the Bureau of Medicine and Surgery (BUMED).
- Perception that NNMC does not have a vision. (see Exhibit 7) WRAMC released a new vision statement three weeks earlier that stated that it would "be a center of

excellence...the number one MTF in the National Capital Area." Why didn't NNMC have a strong statement like that?

- Perception that NNMC personnel do not know where they are going. Will NNMC remain a full-service facility? If not, it will lose patients, residents, etc.
- Part of TRICARE is the prevention aspect. NNMC does a good job with areas such as breast care (i.e. breast care center). We are doing our part with the prevention aspect. It is a draw to Bethesda that we do a lot of prevention care through our clinics. These need to be documented.

The general feeling of desperation and the desire to understand what lay in store for NNMC Bethesda could be felt throughout the room during this early discussion period of the October offsite.

Following the general discussion, board members presented a specific goal that resulted from the BOD offsite. A total of six goals were presented to the group:

- USNS COMFORT will be the readiness platform of choice for operational commanders
- Our information management and information technology (IM/IT) supports optimal decision making
- We will use best business practices to become a most effective and efficient organization
- We will be the command of choice for duty assignment, GME, and training
- We will be the provider of choice for quality healthcare
- We will maximize the health of our patient population

For the purpose of this case study, the second goal above will be the main focus from this point forward.

There were two board members who were goal champions for the IM/IT goal group (as it was initially called): Director, Prevention and Wellness Service Line and Director, Administration Service Line. The Director, Prevention and Wellness Service Line was new to the board of directors, but had been a staff member (psychiatrist) for nearly a decade. The Director, Administration Service Line was a Medical Service Corps officer who had been one of the original board members who resigned his position prior to Transformation, re-applied and interviewed for the job, and was subsequently re-hired. The Director, Prevention and Wellness Service Line had taken a keen interest in data collection over the years, specifically the entire process of data collection. The Director, Administration Service Line held a patient administration subspecialty, had worked in the patient administration division at NNMC about ten years prior and therefore held first-hand knowledge of many of the systems that directly related to patient care (i.e. medical records). Both gentlemen were also active members of the Data Configuration Control Committee, a group that had since its inception the previous year was dedicated to identifying all information systems throughout the command that dealt with any type of data. After identification, the group also focused on the processes involved with each data system in order to identify any lapses in reliability and validity. A common complaint throughout the command surrounded the perception that a requested report could have any number of results, depending on who collected and analyzed the data.

The CIO was not present during the morning session of the second day, when the groups began to select key issues upon which to focus during the coming year. Unfortunately, he had to attend a critical HIPAA meeting for area CIOs. Had he been there, he would have been able to add to the discussion and clear some initial confusion that goal group members experienced. As a result, by the time he arrived at the offsite, issues were already selected that were inappropriate due to a couple of reasons. Some issues were already non-issues, meaning that they were already being worked or even completed.

The commanding officer presented a concise summary of the events that led up to the Transformation during a May 2001 brief to the surveyors of the Joint Commission on the Accreditation of Hospital Organizations. In her presentation, she described the reasons behind the organizational transformation from the typical vertical organization with twelve directorates and many organizational codes (divisions) to the service line concept. The service line concept groups like patient care services under a single directorate, emphasizing a patient focused basis of care throughout the organization. The service line concept not only enhances patient care, but effectively displays coordination of care while at the same time emphasizes communication between and among providers and support staff. The commander used the creation of the Musculoskeletal Service Line, under the Restorative Care Service as an example of an effective service line.

30 Oct 00 Admiral's Call Notes:

- All levels of personnel shared common concerns that included a couple of IM/IT concerns, specifically: Data management (ADS/CIS) and the usefulness of the information; number of computers available for residents to use. This is a logistics issue as well as a misperception. *For the first several months of Transformation, staff members (residents included) had limited access and some were still trying to get accounts. Ward staff preferred to use CHCS accounts for all business including email traffic rather than Outlook accounts that the rest of the command used for primary means of communication. The wards had a limited number of computers available for staff to use during the day. The medical library had six computers for public use, but the library was at first not open past normal working hours. (Note: medical staff has since received after-hour library privileges with an electronic access card.) The goal of the IM/IT staff was to give all personnel Outlook accounts.*

ANNUAL PLAN: One year objectives. "*" match with common concerns.
• AD ready to deploy: *Ensures USNS Comfort and other platform personnel are ready to meet operational commander's needs*
•Sustain hospital operations during deployment: Need mechanisms in place: Contracts, reservists, etc.
• *Measure of performance used by leaders to make informed decisions*: *Will allow us to support optimal decision making. Common concern: IM/IT – Usefulness of information*
• *Resources maximized for care/services*: *Key component to ensure most effective/efficient organization. Includes all resources: $, people, facilities, etc. Common concern: staff shortages/HRO, Resources*
• GME programs second to none: *We will be the command of choice for duty, GME, training.*
• Working living environment: *Same as GME*• Professional development resourced/optimized: *Same as GME*
• *Access to healthcare is convenient*: *Providing convenient access will help ensure we are the provider of choice for quality healthcare. Common concern: Appointing*
• Measure health status: *Ensure we maximize health of our patient population. Will start with immunizations.*

(See Exhibit 17 for NNMC Chain of Command under Transformation)

Recent History of the Information Technology Service Line

The information technology service line consisted of the following services before the Transformation: Information systems service, information management service, information systems security manager, and integration and strategic planning technical adviser. The current chief information officer (CIO), an active duty lieutenant commander, started working at NNMC in May 1998. He is preparing to retire from active duty naval service at the end of May 2001. His direct supervisor is the director for administration (DFA), an active duty captain, who began working at NNMC in July 1998 and recently retired after 34 years of active duty service. These two officers provided the energy for the new direction that the information technology services would be taking over the next two and a one-half years. They each played a significant role in the development of ITS, most importantly the implementation of the Common Operating Environment (COE), the current annual goal for ITS. The full implementation of the COE at NNMC was a direct result of what is known by the leadership as "the Harris Study."

NNMC hired Harris Corporation to evaluate its Distributed Computing Environment (DCE) in mid-1999. According to Harris Corporation, a DCE is "the acquisition, installation, management, and life-cycle support of client, server, and network assets...may also include mid-range computing assets based on client requirements" (DCE Benchmark Study, Summary Results, Harris Corporation, 27Sep99). Several months were spent evaluating NNMC's DCE as it was in 1999 as well as in its future state. A primary part of the study was the evaluation of a seat management concept as an option for the future of NNMC.

Harris did the following:

- Performed a DCE Benchmark, both qualitative and quantitative
- Developed a Future State (FS) Total Cost of Ownership (TCO)
- Provided recommendations for improving DCE support within NNMC
- Evaluated Seat as an alternative for achieving the recommended improvements

DCE Benchmark:
Determined the following:

- That the severe under-investment in the NNMC Information Technology (IT) infrastructure and staff has created extremely poor service for end-users and exceedingly high soft costs related to end-user peer-to-peer support and downtime
- Results: trained medical personnel don't have the tools to effectively perform their mission. Many times, have been diverted from their primary mission of patient support to the maintenance of the DCE

The Harris Study presented the same results that the ITS leadership suspected but needed an outside party to prove in order to justify requests for increased funding and support. The study determined that severe under-investment in the ITS infrastructure (including manpower) over recent years created extremely poor service for the end-users. Help desk requests ("trouble tickets") had increased to over 3,000 trouble tickets in the queue with an average turnaround resolution time of six weeks (personal communication, Joey Sowell). Technical support was severely understaffed at the time, forcing end-users to resort to peer-to-peer support in an effort to decrease downtime, an exceedingly high soft-cost for NNMC. Often clinical providers would have to resort to finding creative solutions such as fixing their own desktop problems or finding someone within the workspaces to assist rather than wait six weeks, an obviously inefficient use of their valuable time. The end-result of inadequate technical staff support and funding, according to the Harris Study, was that trained medical personnel did not have the necessary tools to effectively perform their mission.

Currently ITS offers the following products and services, with features listed alongside:

- Help Desk: password, pagers, services and troubleshooting
- Phones: new, move, change or repair phones
- The Computer Store: Solutions for equipments or software
- Clinical Systems: Tracking patients throughout care and service
- Computer Security: For systems, programs & viruses
- Computer Training: Patient systems, internet, Microsoft programs
- NNMC Web Sites: Helps Services develop & maintain web sites
- Communication Center: Official DOD & DON message center

The following is a list of some of the more significant accomplishments that occurred during the current CIO's tenure, as presented in a brief to the Board of Directors:

1. Completion of a five-year strategic plan
2. Completion of an annual plan
3. Completion of the Y2K upgrade throughout the organization (including outlying branch medical clinics)
4. Converted the command's information technology environment to a 90% Common Operating Environment (COE)
5. Reduced trouble call times from 4-6 weeks to 5 days
6. Reduced standing trouble tickets from 1400 to 45
7. Procured NNMC's first LAN firewall with implementation beginning October 2000
8. Identified major design flaws throughout the LAN and began working with TRICARE Information Management Program Office (TIMPO) on repairs

Several initiatives were in place during the last days of the CIO's and DFA's tenure (spring 2001). These initiatives included the following:

1. Completion of the COE
2. Installation of dual routers to reduce fail over
3. Replace server farm (located in a large room in the basement of Building 11) with a single state of the art server solution
4. Replace PBX phone switch (estimated monthly savings of $100,000)
5. Deployment of the Defense Information Network Packeting Archive Communication System (DINPACS), which currently allows storage and retrieval of radiological films

Note: Communications (i.e. telephones and pagers) were an estimated 55% - 75% of the annual ITS budget.

Major challenges and future opportunities include:

- personnel
  - Military, permanent party:
    - Officers: 2
    - Enlisted: 4 E7, 2 ET1 (E-6), 3 junior enlisted, not including medical hold personnel who are in ITS indefinitely
  - Government Service
  - Contract
- support of the branch medical clinics, including the USNS Comfort
- total lease PC program
- Web support: no budget
- Funding

Performance measures currently in place:

- CHCS performance monitoring reports from SAIC
- IT Trouble call backlog
- LAN mean time between failure reports

Partnership/Shared Resources:

- the Information Management Goal Group (IMGG) facilitates clinical staff buy-in to IT/IM projects
- ITCS is active in TRICARE Region 1 Medical Information management Committee (MIMC)
- Memorandum of Understanding (MOU) is in place for IT support of the National Naval Dental Command (NNDC)
- Currently developing a MOU for IT support of the Naval School of Health Sciences (NSHS)

The board of directors recently approved a change in ITS leadership and structure prior to the CIO's retirement. The original proposal, made to the BOD during fall 2000, recommended that the incoming CIO be a government service (GS) employee. According to the outgoing CIO, a civilian CIO would provide stability, continuity in leadership, and valuable insight and knowledge of the organization. Unfortunately, the BOD rejected the proposal for a civilian CIO, but later in March 2001, approved the appointment of this particular civilian employee as the deputy CIO. A gentleman who had been working for NNMC for several years as both a network engineer and supervisor filled the deputy CIO position. He brought with him years of technical expertise and familiarity of the organizational IT infrastructure. The new deputy CIO had long earned the confidence of many key individuals within NNMC, within ITS, and also with outside entities, such as the contractors and other tenant commands on the NNMC campus. He had a reputation of being reliable: if the system or the network went down in the middle of the night or over a weekend, he would either fix it remotely from his home computer (securely equipped with the necessary software to telecommute as needed) or he would drive the fifty mile trek from his home in northern Virginia to Bethesda, Maryland. His management style "worked" with the fickle personalities of the existing ITS crew. Additionally, he was instrumental in creating the ITS infrastructure that prepared NNMC for Y2K and the Common Operating Environment initiative. (The current ITS infrastructure enabled NNMC to successfully compete against WRAMC for the position of host CHCS consolidation, also known as "1CHCS." 1CHCS is an initiative that combines the CHCS functions at the three largest military medical facilities in the Washington DC area: NNMC, WRAMC, and MGAFMC.)

He would soon serve under the incoming military officer, a nurse corps officer with several years experience with the Naval Medical Information Management Center (NMIMC) but with little technical knowledge or "know-how."

The Environment surrounding NNMC ITS

As Transformation continued full speed ahead during the summer months of 2000, there was much grumbling to be heard throughout NNMC. Many staff members took advantage of the confidential interviews that were held with members of the review panel and unleashed their doubts and their support of the Transformation. According to Robbins, changing conditions demand structural changes (Robbins, 1998). NNMC responded to the change in health care

delivery and identified market trends by committing to necessary structural changes, in other words, committing to a full-blown Transformation.

Captain Smith of NNMC's Behavioral Healthcare Service Line summed up the feelings of a good number of NNMC personnel when at a recent offsite he stated the following quote: "What am I doing here? Why wasn't I consulted?" Although the command leadership attempted to convey the process of organizational change from the early days of Pre-Transformation, there was still a lot of grumbling about the change, even after the first 100 days had past. The command leadership employed several techniques to calm uneasy nerves, such as publishing weekly updates in the base newspaper and offering focus groups and Admiral's calls.

Initially, the ITS staff did not appear to be directly affected by the stress of changes throughout the organization during Transformation. The ITS senior leadership, systems staff and most of the network operations staff were housed in a building across the street from the main hospital facility and therefore, geographically separated from the majority of the hospital. Additionally, in an effort to ensure a smooth transition from the old organizational structure to service lines, the Administration Service Line, which includes ITS, was among the last services to completely transition to service line leadership teams. ITS personnel did not experience as high levels of stress resulting from Transformation as felt by the other service lines until several months later. The initial stress encountered by ITS personnel resulted from the deluge of service requests initiated by the other service lines. Additional stress was created due to the lack of a defined budget for particular programs that enhanced and supported Transformation efforts such as the command webpage on a secure intranet.

The ITS personnel encountered other challenges during this period of Transformation. Internal challenges to the service line appeared to concentrate on staffing issues. Distance between the different ITS services seemed to contribute to the lack of cohesiveness within the service line. The main ITS leadership (CIO, deputy CIO, service line managers) maintained offices in Building 12 (see base map, NNMC), giving the hospital leadership greater access and convenience since Buildings 9 and 10 were located across the street and housed the command suite as well as critical patient care areas. The One-Stop Shop, which handles incoming requests for computer, telephone and pager support, was conveniently located within Building 10. The Telemedicine shop was located in Building 9. Network operations was unique in that its staff was split by function as well as locales: network engineers sat in Building 12, but their servers were maintained in the basement of Building 11, across the compound on the other side of the main hospital buildings. The Message Center was located in Building 2, in an area easily missed by passersby. The Communications (telephone) personnel were located in Building 1 and were constantly on foot throughout the main hospital buildings. Consequently, communication between the various areas of ITS appeared to be choppy at best and personnel were sometimes unintentionally left out of events (i.e. luncheons).
In addition to the lack of cohesiveness that arose as a result of geography (different buildings), there were also conflicts that occurred often due to personality issues. The staff mix in ITS included government service employees (many of whom were middle to upper management levels), contract employees, and a small number of military (enlisted and officer ranks). Resentment towards middle management created tension within workspaces. Situations arising from personality conflicts are mentioned within the case study.

Let's Talk About Change: How did Transformation REALLY affect ITCS?

The Transformation did not directly affect ITS, although it did affect the end users of ITS-supported systems. Each Service line dealt with the organizational changes directly, calling upon ITS mainly for systems support. For instance, when personnel moved from one work area to another due to the reorganization into service lines, the associated computer systems and telephone lines also moved. ITS worked closely with the Public Affairs Office and the

Administrative Service Line to ensure that communications between NNMC customers and the re-named services were kept intact.

ITS was more directly affected by changes that resulted from the initial "shock" of Transformation: the desire for optimal decision making, as indicated in the current NNMC annual plan's objectives and goals listed below as well as in Appendix A:

Command Objective: Our information management and information technology supports optimal decision-making.

Associated Goals:

1. Measures of performance are used by leaders and managers to make informed data driven decisions.
2. An information technology system with robust communication capability, remote administration, asset management and centralized software distribution is resourced, deployed and maintained.
3. Data acquisition, storage, retrieval and reporting is optimized.
4. Data quality meets or exceeds DoD standards.

How else did it affect ITS?

- *increase in workload for enlisted personnel*
    - *rather than rate-specific jobs, personnel spent a lot of time moving equipment as hospital staff moved as a result of realignment (Transformation)*
    - *IT requirements increased, especially when staff members were taken out of jobs that already had IT equipment in place and put into new jobs without the proper equipment*
    - *Poor morale: no tangible rewards for the enlisted ITS personnel who provided much of the manual labor to move IT equipment or find IT equipment*
- *"too many off-the-cuff planning without proper process planning"*
- *question on when they will see the benefits of realignment*

ITS just recently started turning over to the service line concept in March 2001. Administration service line was one of the last services to go to realign into service lines. Why? No link is broken in communications throughout the organization. Clinical areas went to service lines first.

Potential problems with personnel have recently surfaced: because of the mix between military and civilians in leadership roles in ITS, the chain of command may be questionable at times, especially for junior enlisted who fall under both a military and civilian supervisor.

These objectives and goals were decided upon and solidified during a two-stage strategic planning conference in late October 2000. The first stage of this strategic planning conference was a three-day conference that involved only the board of directors and the six associate directors for each service line. During this period, this small leadership group took the existing strategic plan and conducted a SWOT analysis (see Appendix). Goals were developed: transformation and optimization goals. The deputy commander, who was fairly new to the command, described these two strategic goals as "an amorphous blob that he wasn't sure where they fit in...They become part of the process and things that you want to take into consideration... the way we get from here to there (strategic plan)." The SWOT analysis enabled the senior leadership to focus on the following key strategic issues to develop a strategic plan:

1. Access
2. Information management
3. Partnerships in terms of Graduate Medical Education (GME) and ways to enhance GME

4. Customer focused care
5. Staff focus
6. Readiness optimization or supporting "big Navy"
7. Marketing
8. GME

The next stage, which lasted three days, brought in the next level of leadership, the service line leadership teams.

What's really going on in ITS?

What's our Budget...really? (see Excel spreadsheets attached) Who holds the purse strings and why? Does every major IT issue really need to get BOD approval? How does the Naval Medical Information Management Command (NMIMC) get involved and why?

What about training? Should training be part of ITS or Staff Education and Training? Who should fund training, whether internal or external? *By July 2001, all computer training had shifted under the Staff Education and Training department. Maintenance of equipment still fell under the ITS service line.*

Who's in charge?

Prior to the arrival of the current CIO, ITS had an ill-defined organizational structure. The ITS organizational structure experienced continual changes to reflect staffing changes and was finally forced to settle on an organizational structure soon after the Transformation took effect. (See Exhibit 5 for the new organizational flow chart) There were several deciding factors that influenced the new flow chart which took affect in March 2001. First and foremost, personnel changes required a closer look at staffing effectiveness. A new CIO was arriving and the moment was ripe for necessary change. New personnel were arriving while others were leaving ITS within a short period of time. Second, the order throughout the command was to finalize the organizational charts within each specific service, such as ITS. The issues of authority (who was in charge of personnel, civilian or military) desperately needed to be addressed, especially if there were personnel shifts between service lines or within a service line. ITS was not immune to the questions of chain of command that plagued the rest of the organization after Transformation. The ITS staff was a mix of military, civilian government employees and civilian contractors. Who was in charge of whom was a repeated question heard in the hallways. Should a civilian employee supervisor sign military documents such as leave papers for military personnel? In addition to necessary adjustments in leadership, differing management styles sometimes led to grudge matches within workspaces that threatened to make a tense situation even worse.

Too many cooks... Information Technology Goal Group, Data configuration, Utilization Management, managed care... These areas were staffed with subject matter experts who analyzed data. Unfortunately, a provider can ask the same question from any number of people from any of these areas and receive just as many different answers. Where's data integrity? Data quality? A general comment heard from the customers (in this case, the providers) was problems with leadership who make the orders but do not see them manifested. They are too detached from the operational side. The ITS leadership in general functioned well enough to

the satisfaction of the average ITS staff member; the criticism on leadership, it's the ones at the top (NNMC). Currently the deputy commander is the IT driver. Formerly, it was the former DFA who was a good for the IT mission. The former DFA supported leasing vice owning technology that was constantly changing and improving.

What about training existing personnel to improve skills? The training is available, but the time is not. Work still needs to be done and with lack of skilled personnel to do it, individual training to improve skills must take a back seat to command requirements.

Personnel Issues:

Military Leadership

- Perception of favoritism by the OIC (military O-4) for one of the civilian supervisor (GS-12) by some civilian GS-12 employees who had "run-ins" in the past with the supervisor.
- Perception of laziness by some military and contract employees of many of the GS employees. Criticisms were heard by contract employees that once a contract employee became a GS employee, that person "didn't work hard" any longer.
- There was at least one GS employee who was supposed to be a subject matter expert in a particular database but would always defer to another individual at NMIMC. Qualifications came into question in this particular case.
- Support of outlying clinics such as Quantico Branch Medical Clinic became an issue to the network engineers because this support was not in their budget. Quantico BMC was supposed to be funded and supported by the Marine Corps since it was physically located on the Quantico Marine Corps Base. Unfortunately, because it was a branch clinic of NNMC Bethesda, the OIC was "forced" to continually lend technical support, especially because he was now dealing with the end-users' ability to see patients. At times, critical staff had to make the two-hour drive (one-way) to Quantico in order to fulfill a "telephone promise" (an agreement made over the telephone). ITS was "expected" to provide technical support to all the NNMC branch clinics, although funds were not specifically allocated for this function within the budget.

Military vs. Contractors:
Under the new organizational chart, the One-Stop shop falls directly under the military leadership of a first-class petty officer simply because there is a significant number of military personnel temporarily assigned to ITS that require a military supervisor. In practical day-to-day situations, many decisions are left to a civilian contract employee who has been entrusted with increasing supervisory responsibilities over the past several months.

Scuttlebutt, rumor mill... it's only gossip! The current CIO is retiring in the early summer months. Who will be his replacement? Rumors had it that someone from the "enemy's fold" was negotiating orders to come to NNMC. Note: the "enemy" is NMIMC. Could this person effectively continue the good work of the current CIO and bring about necessary changes to make ITCS' business practices the standard in Navy Medicine? What about the rumor that she preferred contract employees and outsourcing to government service (GS) employees?

How did the current leadership address these rumors with the rest of the service line? What changes were made, if any?

What organizational behaviors were displayed?

Other rumors: The affect of CHCS consolidation would be the disappearance of people's jobs, namely those that are in systems that are duplicate jobs with other commands involved in the consolidation. This issue is still up in the air, but it is very likely to occur as a result of merging workforces.

Additional Suggested Questions

How was the Information Technology Service Line affected by Transformation? How do the following specific goals identified for the annual plan support optimization and Transformation?

1. Expand primary care and other services at NNMC
2. Enhance the quality of our medical services
3. Support growth opportunities for our dedicated staff and GME programs
4. Strengthen customer service systems, processes and standards to enhance efficiency
5. Provide a more productive, streamlined and enjoyable visit for our patients

1. Assume the position of the current CIO and assess ITS' performance and business strategy. How are these likely to change in the future?

2. What should be ITS' strategic direction?

3. Assume the position of the current deputy CIO. What recommendations would you make for the incoming CIO?

4. Describe the environment facing NNMC. How does this affect ITS and its mission?

5. What organizational behavior issues are prevalent and how should the problems be appropriately identified and managed?

6. What alternatives could the ITS CIO have taken in creating the organizational flow chart?

Exhibit 1 Monthly phasing plan, ITCS BUDGET, FY 1998

MONTH	TRAVEL	LEASE/RENT	COMMUNICATIONS	COMMERCL MAINT	PURCH SERVICES	CONSUM SUPPLIES	FUEL	EQUIP <25.0k	PRINTING	OTHER	PHARMACEUTICAL	SUBTOTAL OPS	CIV PERS SALARY	CIV PERS BENEFITS	SUBT LABOR	TOTAL	STAFFING (END STRENGTHS) AUTH (CIV)	ON-BOARD (CIV)	AUTH (MIL)	ON-BOARD (MIL)
OCT	0	7	816	162	54	0	0	0	0	0	0	1039	112	29	141	1180	0	34	0	0
NOV	0	0	0	0	0	2	0	0	0	0	0	2	110	27	137	139	0	0	0	0
DEC	1	46	63	9	83	21	0	0	0	0	0	223	112	29	141	364	0	0	0	0
JAN	3	0	946	0	46	20	0	0	0	0	0	1015	111	29	140	1154	0	0	0	0
FEB	2	0	0	0	0	18	0	0	0	0	0	20	109	26	135	155	0	0	0	0
MAR	1	0	0	0	0	20	0	0	0	0	0	21	112	29	141	162	0	0	0	0
APR	1	0	792	0	0	19	0	0	0	0	0	812	112	28	140	952	0	0	0	0
MAY	1	0	0	0	0	18	0	0	0	0	0	19	108	27	135	154	0	0	0	0
JUN	1	0	0	0	0	20	0	0	0	0	0	21	111	27	138	159	0	0	0	0
JUL	9	0	792	0	0	19	0	0	0	0	0	820	134	2	116	936	0	0	0	0
AUG	0	0	0	0	600	18	0	0	0	0	0	618	(62)	(20)	(82)	536	0	0	0	0
SEP	1	2	102	(9)	24	29	0	0	0	0	0	149	(77)	2	(75)	29	0	0	0	0
TOTAL	20	55	3511	162	807	204	0	0	0	0	0	4759	992	235	1207	5920	0	34	0	0
QTR1	1	53	879	171	137	23	0	0	0	0	0	1264	334	85	419	1683	0	0	0	0
QTR2	6	0	946	0	46	58	0	0	0	0	0	1056	332	84	416	1471	0	0	0	0
QTR3	3	0	792	0	0	57	0	0	0	0	0	852	331	82	413	1265	0	0	0	0
QTR4	10	2	894	(9)	624	66	0	0	0	0	0	1587	(5)	(16)	(41)	1501	0	0	0	0
																				0
FY96	5	23	3547	142	531	139	0	630	0	0	0	5017	0	0	1528	6545	0	0	0	0
FY97	17	49	3782	153	2371	192	0	195	0	0	0	6759	0	0	1281	8040	0	0	0	0

Exhibit 2 Monthly phasing plan, ITS BUDGET, FY 1999

MONTH	TRAVEL PERSONNEL	TRANSPORTATION OF THINGS	UTILITIES/LEASE/RENT	COMMUNICATIONS	PURCHASED MAINTENANCE	PURCHASED SERVICES	SUPPLIES	FUEL	EQUIPMT <100.0K	PRINTING DIRECT $	REIMB PHARMACEUTICALS		PCS	SUBTOT OPS	CIV PERS SALARY	CIV PERS BENEFITS	SUBTOT LABOR	TOTAL
OCT	2	0	16	771	0	2	14	0	0	0	0	0	0	805	98	25	123	928
NOV	0	0	0	74	0	81	20	0	84	0	0	0	0	259	93	23	116	375
DEC	9	0	0	4	0	0	17	0	0	0	0	0	0	30	102	26	128	158
JAN	2	0	0	765	0	0	22	0	0	0	0	0	0	789	96	24	120	909
FEB	0	0	0	0	0	0	16	0	0	0	0	0	0	16	100	24	124	140
MAR	0	0	0	16	0	0	6	0	0	0	0	0	0	22	104	26	130	152
APR	2	0	0	770	0	100	21	0	0	0	0	0	0	893	(624)	26	(598)	295
MAY	0	0	0	0	0	0	14	0	23	0	0	0	0	37	96	24	120	157
JUN	0	0	0	0	0	0	8	0	0	0	0	0	0	8	100	26	126	134
JUL	1	0	0	547	3	708	79	0	283	0	0	0	0	1621	100	26	126	1747
AUG	(12)	0	14	17	19	323	(16)	0	(203)	0	0	0	0	142	100	26	126	268
SEP	0	0	0	0	0	501	65	0	(40)	0	0	0	0	526	441	138	579	1105
TOTAL	4	0	30	2964	22	1715	266	0	147	0	0	0	0	5148	806	414	1220	6368
QTR1	11	0	16	849	0	83	51	0	84	0	0	0	0	1094	293	74	367	1461
QTR2	2	0	0	781	0	0	44	0	0	0	0	0	0	827	300	74	374	1201
QTR3	2	0	0	770	0	100	43	0	23	0	0	0	0	938	(428)	76	(352)	586
QTR4	(11)	0	14	564	22	1532	128	0	40	0	0	0	0	2289	641	190	831	3120

Exhibit 3 Monthly phasing plan, ITS BUDGET, FY 2000

MONTH	TRAVEL	PERSONNEL TRANSPORTATION OF THINGS	UTILITIES/LEASE/RENT	COMMUNICATIONS	PURCHASED MAINTENANCE	PURCHASED SERVICES	SUPPLIES	FUEL	EQUIPMENT <100.0K	PRINTING DIRECT $ REIMB	PHARMACEUTICALS	PCS	SUBTOTAL OPS	CIV PERS SALARY	CIV PERS BENEFITS	SUBTOTAL LABOR	TOTAL
OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	24	112	112
NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	25	113	113
DEC	3	0	27	751	7	350	32	0	1	0	0	0	0	1171	92	29	121	1292
JAN	3	0	0	(2)	16	3	54	0	190	0	0	0	0	264	83	34	117	381
FEB	0	0	0	680	0	42	105	0	9	0	0	0	0	836	141	31	172	1008
MAR	0	0	22	30	0	0	(78)	0	115	0	0	0	0	89	139	35	174	263
APR	10	0	0	680	0	29	8	0	0	0	0	0	0	727	81	20	101	828
MAY	0	0	0	0	0	9	26	0	0	0	0	0	0	35	91	24	115	150
JUN	0	0	0	0	0	0	20	0	0	0	0	0	0	20	88	23	111	131
JUL	4	0	(15)	693	11	54	18	0	(31)	0	0	0	0	734	84	22	106	840
AUG	0	0	0	0	1	0	17	0	39	0	0	0	0	57	85	23	108	165
SEP	0	0	31	0	0	0	17	0	0	0	0	0	0	48	84	21	105	153
TOTAL	20	0	65	2832	35	487	219	0	323	0	0	0	0	3981	1144	311	1455	5436
QTR1	3	0	27	751	7	350	32	0	1	0	0	0	0	1171	268	78	346	1517
QTR2	3	0	22	708	16	45	81	0	314	0	0	0	0	1189	363	100	463	1652
QTR3	10	0	0	680	0	38	54	0	0	0	0	0	0	782	260	67	327	1109
QTR4	4	0	16	693	12	54	52	0	8	0	0	0	0	839	253	66	319	1158
FY99	4	0	30	2964	22	1715	266	0	147	0	0	0	0	5148	806	414	1220	6368
FY00	20	0	68	2832	32	487	219	0	319	0	0	0	0	3977	1144	311	1455	5432
Variance	(16)	0	(38)	132	(10)	1228	47	0	(172)	0	0	0	0	1171	(338)	103	(235)	936

Exhibit 4 Monthly phasing plan, ITS BUDGET, FY 2001

MONTH	TRAVEL	PERSONNEL TRANSPORTATION OF THINGS	UTILITIES/LEASE/RENT	COMMUNICATIONS	PURCHASED MAINTENANCE	PURCHASED SERVICES	SUPPLIES	FUEL	EQUIPMENT <100.0K	PRINTING DIRECT $ REIMB	PHARMACEUTICALS	PCS	SUBTOTAL OPS	CIV PERS SALARY	CIV PERS BENEFITS	SUBTOTAL LABOR	TOTAL
OCT	0	0	0	0	0	0	1	0	0	0	0	0	1	119	27	146	147
NOV	0	0	60	678	29	1298	10	0	33	0	0	0	2108	118	27	145	2253
DEC	0	0	52	0	0	239	43	0	6	0	0	0	340	115	27	142	482
JAN	2	0	0	666	2	(238)	62	0	72	0	0	0	566	127	30	157	723
FEB	0	0	0	0	0	36	12	0	0	0	0	0	48	126	27	153	201
MAR	0	0	22	0	0	0	10	0	80	0	0	0	112	136	28	164	276
APR	0	0	0	666	0	32	65	0	30	0	0	0	793	143	27	170	963
MAY	0	0	0	0	0	7	5	0	3	0	0	0	15	133	31	164	179
JUN	0	0	0	0	0	0	5	0	3	0	0	0	8	139	27	166	174
JUL	4	0	0	666	0	27	59	0	23	0	0	0	779	143	28	171	950
AUG	0	0	0	0	1	0	5	0	0	0	0	0	6	148	30	178	184
SEP	0	0	22	0	0	0	5	0	0	0	0	0	27	134	27	161	188
TOTAL	6	0	156	2676	32	1401	282	0	250	0	0	0	4803	1581	336	1917	6720
QTR1	0	0	112	678	29	1537	54	0	39	0	0	0	2449	352	81	433	2882
QTR2	2	0	22	666	2	(202)	84	0	152	0	0	0	726	389	85	474	1200
QTR3	0	0	0	666	0	39	75	0	36	0	0	0	816	415	85	500	1316
QTR4	4	0	22	666	1	27	69	0	23	0	0	0	812	425	85	510	1322
FY00	20	0	65	2832	35	487	219	0	323	0	0	0	3981				3981
FY01	6	0	130	2676	32	1660	276	0	250	0	0	0	5030				5030
Variance	14	0	(65)	156	3	(1173)	(57)	0	73	0	0	0	(1049)				(1049)

Exhibit 5 ITCS Organizational Flowchart: 1998

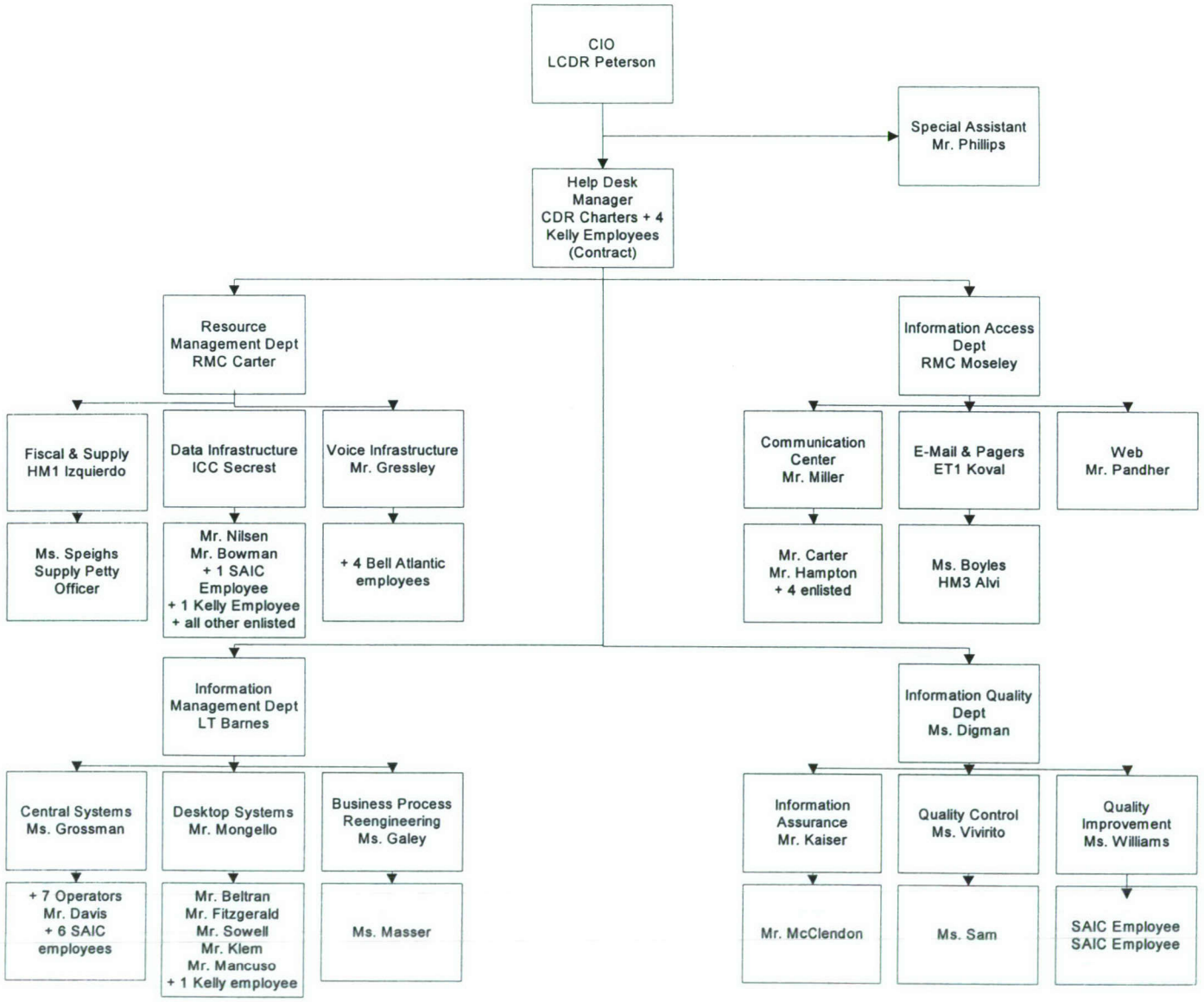


Exhibit 6 ITCS Organizational Flowchart: December 1999

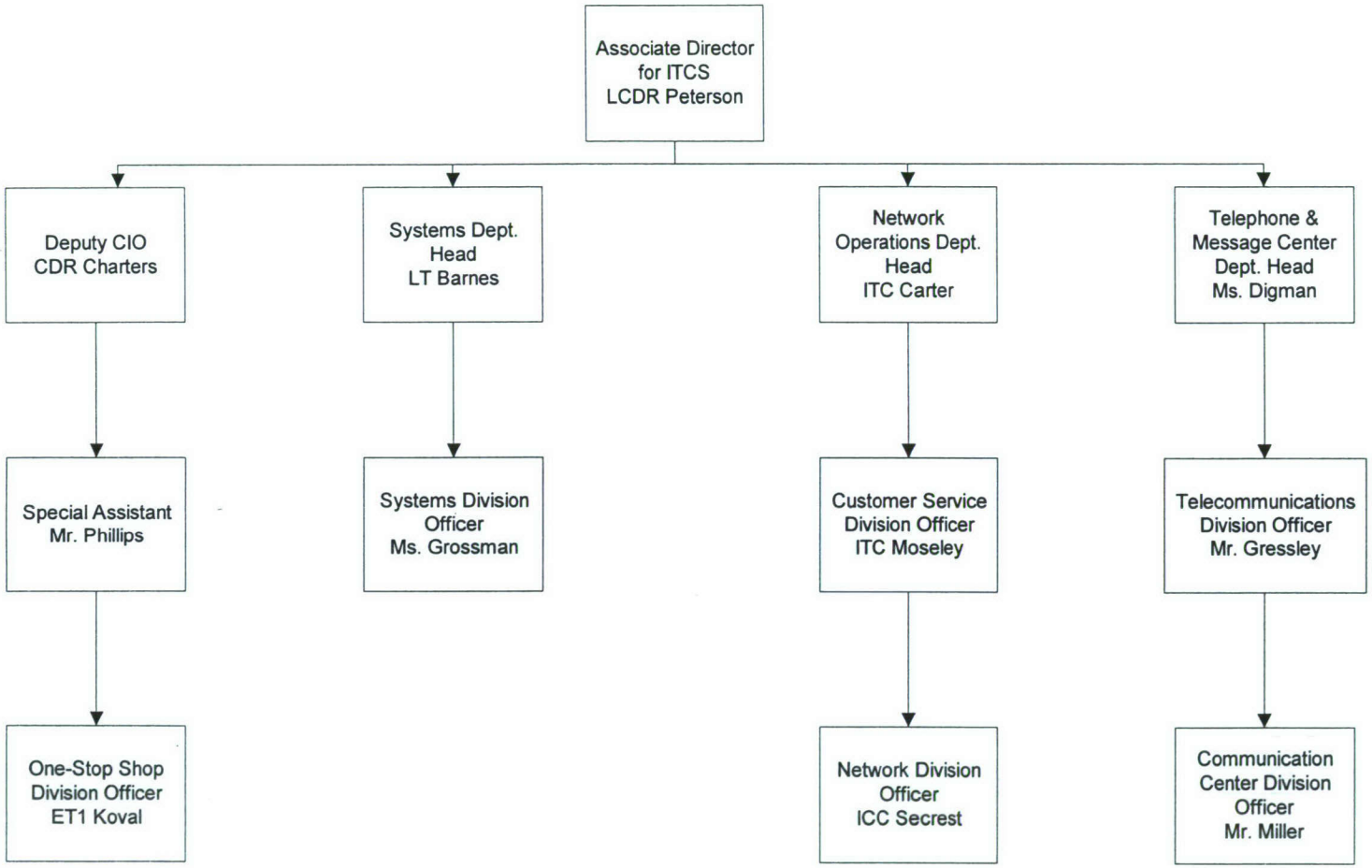


Exhibit 7 Proposed ITCS Organizational Flowchart: December 2000

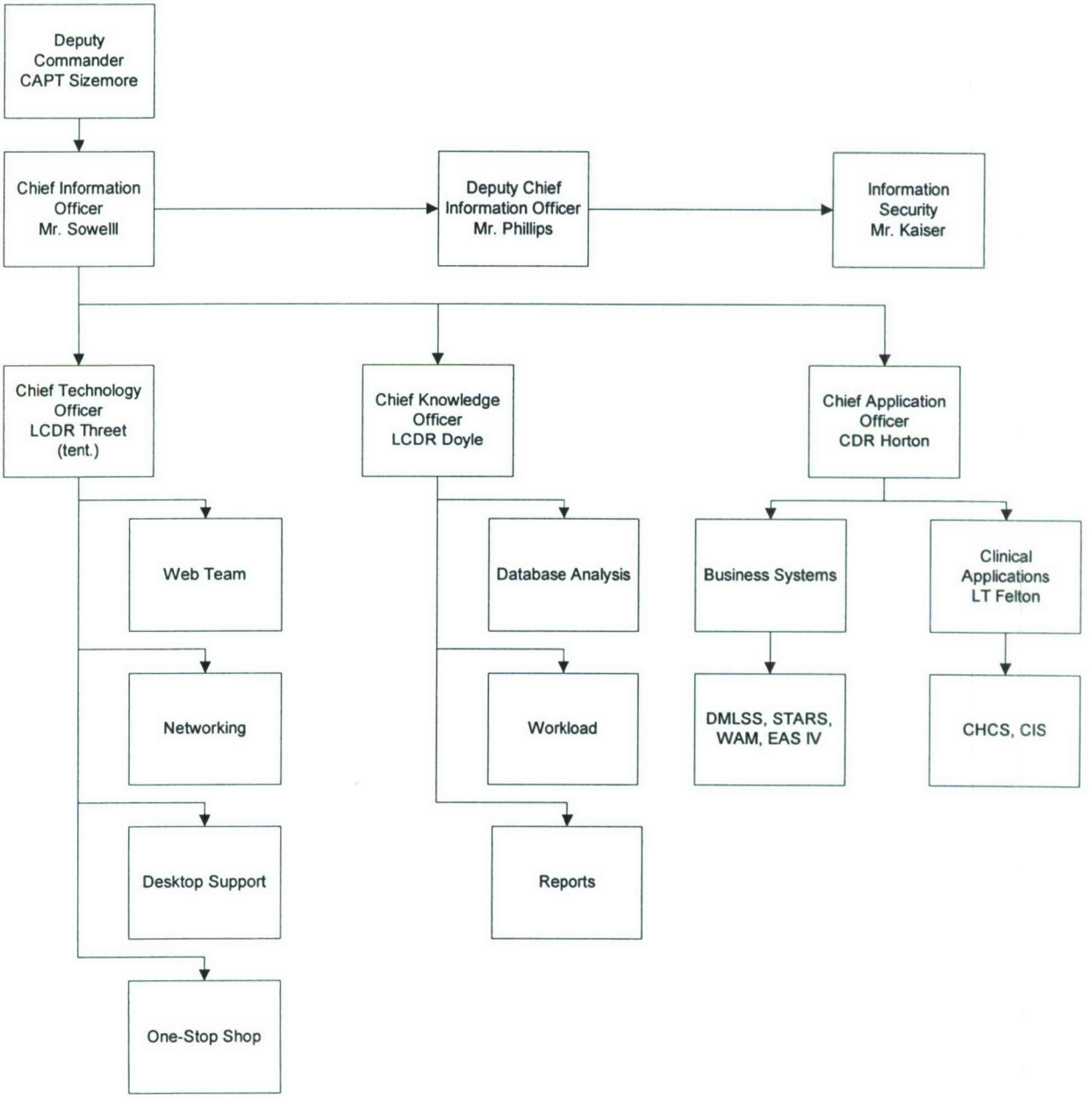


Exhibit 8 ITS Organizational Flowchart March 2001

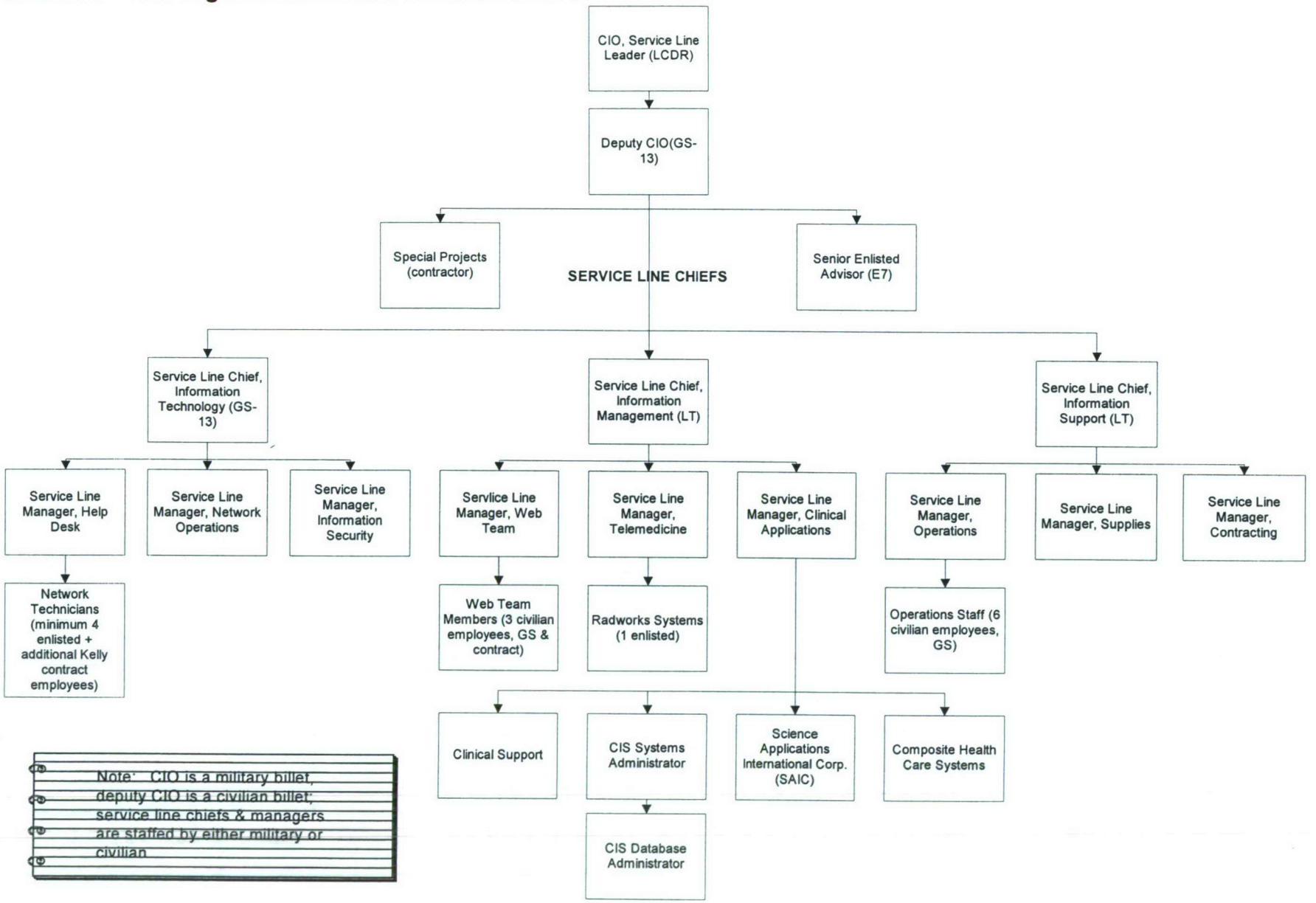


Exhibit 9 ITS "New" Organizational Flow Chart as of May 2001

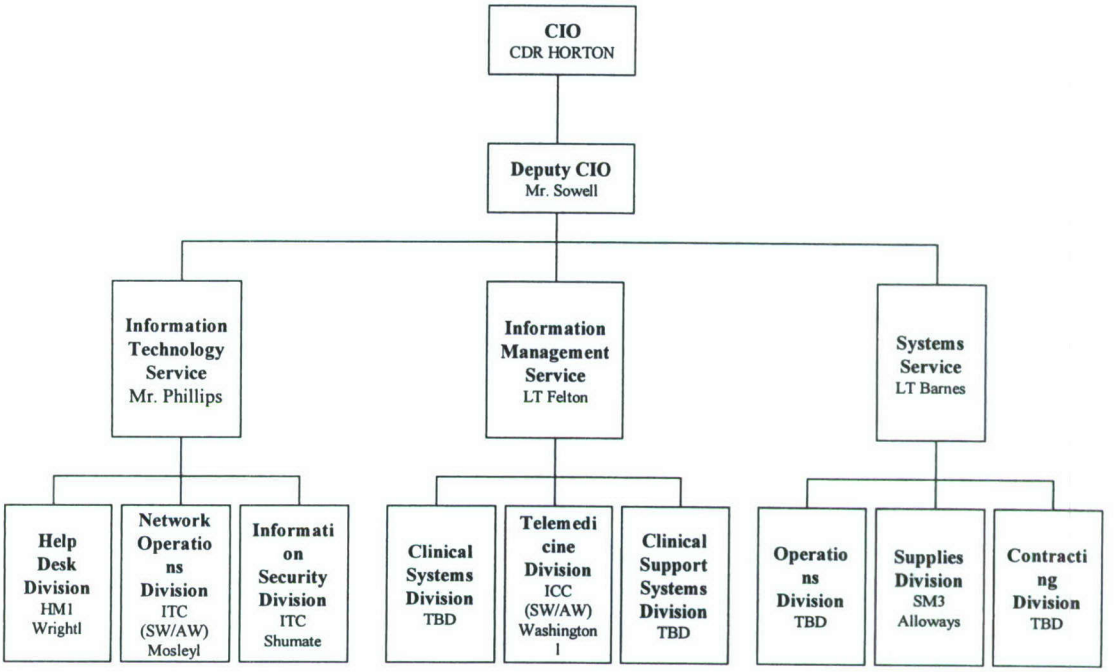


Exhibit 10

NNMC Vision (from Leadership Briefing Presentation):

To be the Flagship or the leader of Navy Medicine in

- ***Force Health Protection***
- ***Graduate Medical Education***
- ***World-class Health Care***

Force Health Protection includes:

- 5 operational platforms of 1500 personnel directly supporting USNS COMFORT, USS BELLEAU WOOD, USS WASP, FH Camp Lejeune, and a MC Unit
- Since October 2000, the Contingency Service Line has processed over 3,500 taskings for external operational or mutual support. (Total manhours away for military total 84,000 manhours)

Graduate Medical education highlights:

- Transitional Internship Program
- 17 Residency Programs
- 7 Fellowship Programs

World-class healthcare is delivered through:

- 60 direct patient care services
- 18 clinical support services
- robust customer services, clinical management and a full array of other facility and administrative services

Exhibit 11

NNMC's Mission (from Leadership Briefing, May 2001):

The flagship's mission is to:

- Maximize force health protection
- Deliver quality, patient-centered care
- Provide world-class customer and patient services
- Ensure graduate medical education programs and professional development for all staff are second to none
- Innovative health care, informatics, and research
- Outstanding base support for tenant commands
- Safeguard our nation by ensuring our President and our country's leaders are healthy
    - We are the President's Hospital.

Exhibit 12

Old NNMC Organizational Structure (by Directorate)

Commander
Deputy Commander

Chief of Clinical Staff
Directorate for Hospital Administration
Directorate for Medical Services
Directorate for Surgical Services
Directorate for Clinical Support Services
Directorate for Nursing Services
Directorate for Occupational and Community Health
Directorate for Healthcare Operations
Directorate for Resources Management
Directorate for Pastoral Care Services

Exhibit 13 New Organizational Structure for NNMC

COMMANDER
Deputy Commander

(Special Assistants:)

Command Master Chief	Chief of Clinical Staff	Chief of Nursing Staff	Safety Dept	Commanding Officer, USNS Comfort	Performance Evaluation and Improvement
Command Ombudsman	Clinical Research Service	EEO Specialist	Staff Judge Advocate	Chief of Staff for Optimization	Office of Command Inspection and Management Control
	Professional Affairs Dept	Public Affairs	Pastoral Care	Manager, American Red Cross	Manager, Navy-Marine Corps Relief Society

PREVENTION & WELLNESS	**RESTORATIVE CARE**	**CLINICAL SUPPORT**	**MANAGED CARE**	**RESOURCES**	**ADMINISTRATION**
Primary Care Service	**Cardiovascular & Critical Care Service**	**Blood Bank Service**	**Customer Service**	**Budget Service**	**Administration Service**
Branch Clinics • Primary Care • Industrial Hygiene • Occupational Medicine	Cardiac Cath Lab	Apheresis	Customer Service Coordinator	**Fiscal Service**	Admin. Services
Emergency Room	Cardiology	Blood Donor Center	Patient Relations	Payroll	CDO Desk
Primary Care Family Health Center	Cardiothoracic Surgery	Transfusion	Protocol	**Medical Accounts Service**	Manpower Management
Primary Care Internal Medicine Clinic • Ambulatory Medicine • Inpatient Medicine	CCU/ICU	**Nutrition Management Service**	Beneficiary Services	Collection Agent	Public Safety Security
Health Promotions	Critical Care Medicine/ICU	Clinical Nutrition	Marketing	Inpatient TPC	Staff Ed & Training
Women's & Children's Health Services	Inpatient Cardiology/CT Surgery	Food Management	**TRICARE Business Service**	Outpatient TPC	**Commercial Services**
Breast Care Center	**Musculoskeletal Service**	**Laboratory Service**	TRICARE COTR	Third Party Liability	Main Street
Pediatrics • Adolescent Medicine • Ambulatory Pediatrics • Specialty Pediatrics • AFCCP • EDIS	Chiropractic Occupational Therapy	Anatomic Pathology	TRICARE Plans and Operations	**Performance Analysis & Reporting**	Exchange
MICC (Mother Infant Child Care)	Orthopedics	Clinical Pathology	TRICARE Business Office	Performance Reporting	Navy Lodge

Exhibit 13 New Organizational Structure for NNMC (continued)

PREVENTION & WELLNESS	RESTORATIVE CARE	CLINICAL SUPPORT	MANAGED CARE	RESOURCES	ADMINISTRATION
Women's & Children's Health Services (continued)	**Musculoskeletal Service (continued)**			**Performance Analysis & Reporting (continued)**	**Commercial Services (continued)**
Neonatology	Physical Medicine & Rehabilitation	**Navy Central HIV Service**	**Clinical Management Service**	Analysis & Evaluation	Package Store
OB/GYN	Physical Therapy	Informetrics	Utilization Management	**Plans, Analysis & Evaluation Service**	**Contingency Service**
Procedural Specialty Services	Podiatry	Serodiagnostic	Case Management		Readiness
Dermatology	Rheumatology	System Support			RLO (Reserve Liaison Office)
Gastroenterology	**Neurosciences Service**	**Pharmacy Service**			**Facilities Management Service**
Pulmonary Medicine • Respiratory Therapy	Neurology	Inpatient Pharmacy			Base Engineering
Disease Management Service	Neurosurgery	Outpatient Pharmacy			Environment Programs
Allergy/Immunology	**Oncology Service**	Clinical Management			Fire Department
Endocrinology	Hematology/ Oncology	Logistics			Hospital Engineering
IDSI	Inpatient Oncology	**Radiology Service**			Planning & Transportation
Infectious Disease	**Operative Care Service**	Diagnostic Radiology			**Information Technology Service**
Nephrology	Ambulatory Surgery Center	Neuroradiology			Communications
Optometry	Anesthesia	Interventional Radiology			Information Management
Behavioral Healthcare Service	Main OR	Nuclear Medicine			Information Technology
Adult Ambulatory Behavioral Healthcare	PACU	Physics and Radiation Safety			Telemedicine
Child & Adolescent Behavioral Healthcare	Preoperative	Radiation Oncology			**Logistics Service**
Primary Behavioral Healthcare	Short Stay Unit				Acquisition Management
CAC/DAPA	Sterile Processing				Contract Management
	Surgery Service				Equipment Management
	General Surgery				Material Management
	Inpatient Surgery				Postal Operations
	Ophthalmology				**Operations Service**
	Oral & Maxillo-facial/Dental				Bachelor Housing
	Otolaryngology				Fisher Houses
	Plastic Surgery				MWR
	Vascular Surgery				Child Development Center
	Urology				**Patient Admin. Service**
					Records Management
					WRAMC Liaison
					Medical Boards
					Decedent Affairs

Exhibit 14

Creating a Vision for the Future (Leadership Briefing, May 2001)

The current strategic plan was created by:

- Reviewing the 1997-1999 Strategic Plan
- Discussion of strengths, weaknesses, opportunities, and threats (SWOT) found in the environmental scan
- Incorporating higher guidance, such as the Military Health System Optimization Plan
- Discussion and understanding of the new transformation plan and vision
- Focus group input conducted with over 100 focus groups with staff and patients concerning transformation

EXHIBIT 15

NNMC Annual Plan

The annual plan was derived from the strategic plan and provides a strong framework for organizational decision making, performance improvement and outcome measurements during the calendar year (2000). It is used to prioritize command activities and decision making. (Leadership Briefing, May 2001)

The nine objectives chosen focus on:

- Sustaining hospital operations during operational readiness taskings
- Ensuring active duty staff is ready to deploy
- Using measures of performance to make informed data driven decisions
- Maximizing resources for care and services
- Providing "second to none" GME programs
- Exceeding staff expectations in terms of the working and living environment
- Resourcing and optimizing professional development for all staff
- Initiating population health initiatives to measure the health status of our beneficiaries
- **Ensuring access to healthcare is convenient for our patients**

Exhibit 16

COMMAND GOALS AND OBJECTIVES

The service line leadership teams determined the following goals and objectives during a three-day strategic planning offsite in October 2000.

GOAL	OBJECTIVES
The USNS Comfort will be the readiness platform of choice for operational commanders	• Our hospital operations are sustained during any Comfort asking. • Our active duty staff is ready to deploy • Our Comfort mission is evident and visible • We train our deployment staff using time efficient and innovative methods
Our information management and information technology supports optimal decision-making	• Measures of performance are used by leaders and managers to make informed data driven decisions • An information technology system with robust communication capability, remote administration, asset management and centralized software distribution is resourced, deployed and maintained. • Data acquisition, storage, retrieval and reporting is optimized. • Data quality meets or exceeds DoD standards
We will use best business practices to become a most effective and efficient organization	• Resources are managed to maximize the delivery of care and services • Best in class strategies systems and processes are imported and exported • Synergistic and productive partnerships support our business practices
We will be the Command of choice for duty assignment, GME and training	• All GME Programs are considered world class • Working and living environments exceed the expectations of our staff • Professional development for all staff is resourced and optimized
We will maximize the health of our patient population	• Healthcare status is systematically measured • Enrollment is optimized • Prevention and intervention are based on identified needs • Healthcare is managed by the appropriate provider
We will be the provider of choice for quality healthcare	• Access to healthcare services is convenient for our patients • Appointments are available with the appropriate provider • The right services are available for our patients • The right services are provided to our patients • Our patients are delighted by our world class customer service • Our reputation as a world class healthcare institution is accepted worldwide

EXHIBIT 17

MINUTES FROM THE FIRST IT OBJECTIVE TEAM MEETING OF 17 NOVEMBER 2000

IT OBJECTIVE TEAM		DATE: November 17, 2000	
Location: IT Conference Room			
Leader: LT Scott	**Timekeeper:** None	**Facilitator:** LT Scott	**Recorder:** ENS Peale

Item:	Discussion:	Decision/Action:
• NNMC IT Annual Plan Presentation	• Phone system: recommend call routing • Switch that IT is trying to buy will have an automated attendant at the clinic level • Goal for today: prioritize focus areas for the coming year	• 4 Focus Areas were determined: 1. Common Operating Environment 2. Standardization of Business Processes 3. Access to Useful Information 4. Improving telecommunications infrastructure
• Focus Area # 1 Common Operating Environment	• Brief discussion to justify COE as the number one focus area • There is a training piece associated with this goal.	Task #1: Implement IT/IM (annual plan), POA&M • Person responsible: LCDR Peterson • Important milestones 1. Legacy Systems to be replaced 2. OMNISERVER (COTS) to replace existing Novell-based system in the O.R. • Resources required—representation by LT Griepentrog, Assistant Director, Resources Service
• Focus Area #2 Standardization of Business Processes to Improve Data Entry Integrity	• Standardization can reduce the probability of errors • After standardization, providers can look for outliers (this helps retention) • Recommend a senior clinician	Task #1: • Person responsible: senior clinician, LCDR Doyle • Important milestones 1. Identify and prioritize critical processes 2. Identify and prioritize best business processes 3. Implement standardized processes 4. Fund resources to meet requirements • Resources required: Critical Members include Configuration Control Committee, Decision Support Team, and Clinical Owners

• Focus Area #3 Access to Useful Information	• A needs assessment should be done to determine value of the data collected.	Task #1: • Person responsible: LT Scott • Important Milestones 1. Review existing dashboard against BUMED report card and TMA initiatives 2. Define reporting requirements for all levels 3. Fund and implement technical solutions (data warehouse); Ex. Database developers and administrators • Resources required: Critical members include ITCS, ad hoc clinical and administrative owners of the system, Performance Reporting
• Focus Area #4 Improve Telecommunications Infrastructure	• Brief discussion regarding benefits of separating the telephone issue from the Common Operating Environment focus • Telephone system issues should not be lumped in with the computer issues.	Task #1: • Person responsible: ET1 Koval • Important Milestones 1. Define business processes needed for all areas for cost effective phone utilization 2. Prioritize standardized features: tiered features (3) 3. Train/deployment 4. Implement 5. Survey • Resources required: Critical members include Assistant Directors
• Desired End State	• The group came to consensus on the desired end state for the IT annual plan, in terms that support optimization and Transformation.	Improving the focus areas of COE, business processes, quality information and telecommunications infrastructure will strengthen customer service systems, processes and standards to enhance efficiency.

Handouts for 17 November: • **Minutes of 17 November**	**Agenda Items for 21November:** **1. Debrief of BOD presentation on 20 November**
Next Meeting:	**Tuesday, 1200, 21 November in the ITCR**

CAPT Candelaria, *Goal Champion*	**E**	**Mr. Chuck Phillips**	**P**	**CDR Sowell**	**P**
CAPT Dinneen, *Goal Champion*	**P**	**Mr. Joseph Kotek**	**P**	**LCDR Doyle**	**P**
LCDR Peterson, *Coordinator*	**E**	**CAPT Haluska**	**E**	**LT Castro**	**P**
Dr. Milman, *Group Leader*	**E**	**CAPT Funari**	**P**	**LT Griepentrog**	**P**
LT Scott, *Group Leader*	**P**	**CDR Blice**	**P**	**ENS Peale**	**P**

EXHIBIT 18

The Eight-Stage Process of Creating Major Change (adapted form John P. Kotter, Leading Change, 1996)

1. Establishing a sense of urgency
   - Examining the market and competitive realities
   - Identifying and discussing crises, potential crises, or major opportunities
2. Creating the guiding coalition
   - Putting together a group with enough power to lead change
   - Getting the group to work together like a team
3. Developing a vision and strategy
   - Creating a vision to help direct the change effort
   - Developing strategies for achieving that vision
4. Communicating the change vision
   - Using every vehicle possible to constantly communicate the new vision and strategies
   - Having the guiding coalition role model the behavior expected of employees
5. Empowering broad-based action
   - Getting rid of obstacles
   - Changing systems or structures that undermine the change vision
   - Encouraging risk taking and nontraditional ideas, activities, and actions
6. Generating short-term wins
   - Planning for visible improvements in performance, or "wins"
   - Creating those wins
   - Visibly recognizing and rewarding people who made the wins possible
7. Consolidating gains and producing more change
   - Using increased credibility to change all systems, structures, and policies that don't fit together and don't fit the transformation vision
   - Hiring, promoting, and developing people who can implement the change vision
   - Reinvigorating the process with new projects, themes, and change agents
8. Anchoring new approaches in the culture
   - Creating better performance through customer- and productivity-oriented behavior, more and better leadership, and more effective management
   - Articulating the connections between new behaviors and organizational success
   - Developing means to ensure leadership development and succession

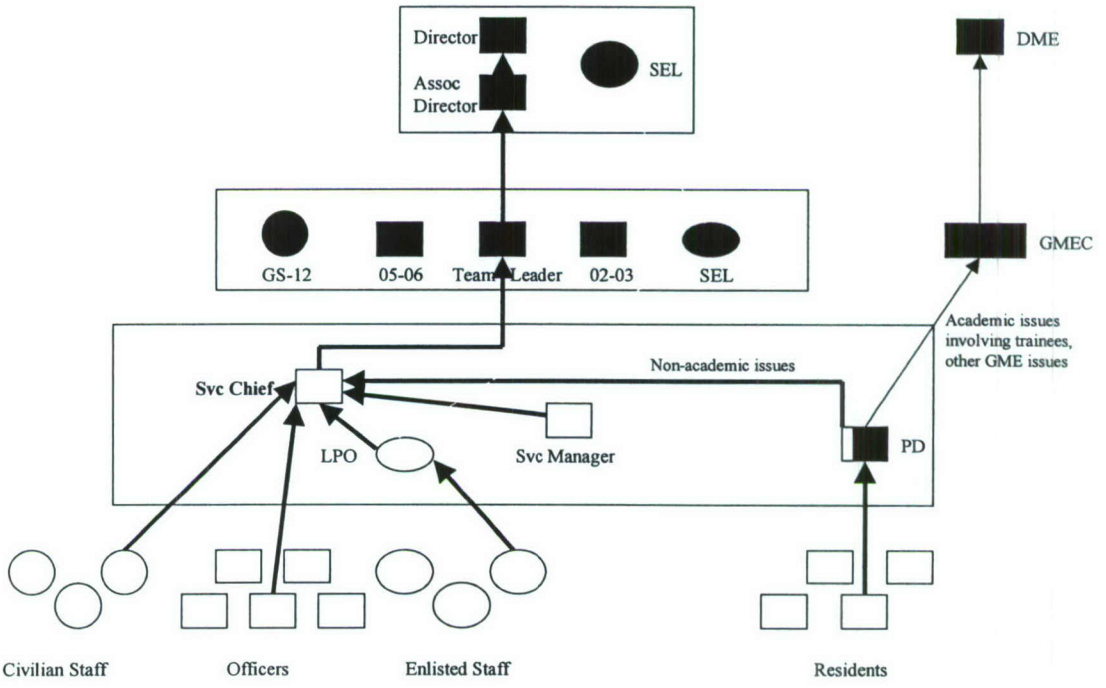
Exhibit 19

Nine Hot Trends, according to *Healthcare Informatics*
http://www.healthcare-informatics.com/issues/2001/02_01/cover.htm 19Apr2001

1. Data Security
2. Wireless
3. ASPs
4. Integration
5. Disease Management
6. Customer Relationship Management
7. Supply Chain Management
8. Convergence

Exhibit 20

Chain of Command Under the NNMC Transformation



Legend:

Director (member of BOD), approved by Commander after interview process
Associate Director (member of BOD), approved by Commander after interview process
SEL Senior Enlisted Leader, approved by BOD after interview process

Service Line Leadership Team (SLLT):
Team Leader (selected from physician or nurse member of SLLT)
Physician (GS-12 or O5-O6 Medical Corps Officer)
Nurse (GS-12 or O5-O6 Nurse Corps Officer)
O2-O3 Medical Service Corps Officer (does not have to be a health care administrator)
SEL Senior Enlisted Leader (E7-E9)

Svc Chief: Service Chief (in the clinical areas, this person might be the most senior physician in the clinic)
LPO: Leading Petty Officer
Svc Manager: Service Manager (civilian or military)

DME: Director Medical Education (member of BOD, approved by Commander after interview process)
GMEC: Graduate Medical Education Coordinator

Exhibit 21 Presentation Transcript from Leadership Briefing to JCAHO Survey Team Presented May 2001, by Commander, NNMC Bethesda

"The National Naval Medical Center is an acute care facility which provides a continuum of care, including, inpatient and outpatient services to military beneficiaries in the National Capitol Area and receives referrals world-wide. Our beneficiary population is composed of duty, retired, and dependents of retired.

Over the course of this brief, I will not only communicate the Mission and Annual Plan of the National Naval Medical Center, but also how we began a journey 9 months ago to transform NNMC into our vision of creating the Flagship of Navy Medicine in Readiness, Graduate Medical Education, and World-class healthcare.

This transformation, I suspect, you will hear a great deal about over the next week. I hope you will get the sense that our transformation is more than just rearranging the deck chairs and flow diagrams, but has and will continue to result in a tangible benefit for our patients and staff alike.

As mentioned, our vision is to be the flagship or the leader of Navy Medicine in Force Health Protection, Graduate Medical Education, and World-class healthcare.

- Force Health Protection includes:
  - 5 operational platforms of 1500 personnel directly supporting USNS COMFORT, USS BELLEAU WOOD, USS WASP, Fleet Hospital Camp Lejeune, and a Marine Corps Unit.
  - Since October 2000, our Contingency Service has processed over 3,500 taskings for external operational or mutual support. Total manhours away for military "on-duty" 24 hours times 7 days total 84,000 manhours.
- Graduate Medical Education includes:
  - A Transitional Leadership Program
  - 17 of the (area) Residency Programs
  - 7 of the (area) Fellowship Programs
- We strive to deliver world-class healthcare through:
  - 60 direct patient care services
  - 18 clinical support services
  - Robust customer services, clinical management and full array of other facility and administrative services

The flagship's mission is to:

- Maximize force health protection
- Deliver quality, patient-centered care
- Provide world-class customer and patient services
- Ensure graduate medical education programs and professional development for all staff are second to none
- Keep on the cutting edge through innovative healthcare, informatics and research
- Take care of our tenant commands through outstanding base support
- Safeguard our nation by ensuring our President and our country's leaders are healthy.

We are the President's Hospital.

As mentioned, our vision is to be the best of the best in carrying out a mission that is multi-focused. To keep all the balls in the air at one time and our eye on the vision, a strong strategic plan is essential.

The current strategic plan was created by:

- Thoroughly reviewing the 1997-1999 Strategic Plan
- Lengthy discussion of our strengths, weaknesses, opportunities, and threats
- Incorporating higher authority guidance in terms of the Military Health System Optimization Plan
- Discussion and understanding of our new transformation plan and vision, and
- Last but most importantly, the input of our staff gained through nearly a month of conducting over 100 focus groups with staff and patients concerning transformation

The Annual Plan was derived from the strategic plan and provides a strong framework for organizational decision-making, performance improvement and outcome measurements during this calendar year. It is used to prioritize command activities and decision-making.

The nine objectives chosen focus on:

- Sustaining hospital operations during operational readiness taskings
- Ensuring our active duty staff is ready to deploy
- Using measures of performance to make informed data driven decisions
- Maximizing resources for care/services
- Providing second to none GME programs
- Exceeding staff expectations in terms of the working/living environment
- Resourcing and optimizing professional development for all staff
- Initiating population health initiatives to measure the health status of our beneficiaries
- Ensuring access to healthcare is convenient for our patients

The Navy Core Values are honor, courage and commitment. To these, the National Naval Medical Center has added a fourth—CARING.

Caring in all aspects of health care delivery and personal interactions with patients, staff, visitors and any individual who enters our doors is what we strive to do best.

(Transformation: A Historical Perspective)
NNMC has a very rich history as a tertiary care facility, with little or no past competition. Referrals were received from other military healthcare facilities within the U.S. and from around the world. That changed dramatically with the inception of TRICARE.

(Organization: Pre-Transformation)
This slide depicts the traditional leadership structure of NNMC before organizational transformation was initiated:

- NNMC was a typical vertical organization with 12 directorates and many organizational codes
- Like services necessary for coordination of patient care were scattered across several directorates, making communication and continuity very difficult

For example, if a patient required care for a musculoskeletal problem or injury, they would have been cared for by personnel in five or more directorates.

As you will see (momentarily), our transformation has created service lines, grouping like patient services under one directorate, which enhances patient care, coordination, and communication.

(Transformation: Why Change?)

So whey did the Flagship decide such a drastic change was necessary? First, our environmental assessment clearly pointed out that it was getting ever more difficult to respond to the changing healthcare environment. Our data showed:

- Low primary care enrollment into TRICARE
- A declining market share
- No competitive market advantage
- A high cost per work unit
- And, an unpredictable GME patient volume

Additionally, we could not respond to the challenge of optimization with:

- A fragmented delivery system
- Uncoordinated care
- And unresponsive systems, processes and schedules

We realized that if we continue to do what we always did, we will always get what we always got. And that would certainly be our demise.

(Patient Focused Care)
First, we needed to 'keep the main thing, the main thing' and that was our patient. We are here because of the patients and we needed to go back to the basics and keep the patient in the center of our organization...

(Transformation: Change Specifics)
In transforming, our goals were:

- To increase our primary care base through portals of entry through a Directorate from Prevention and Wellness
- To optimize delivery of specialty care through a Directorate of Restorative Care
- To ensure integrity of our Graduate Medical Education Programs
- To consolidate all factors of production into integrated service lines

Additionally, we needed to:

- Redistribute resources to support our mission priorities
- Provide common performance expectations and outcome measures
- Streamline decision making
- Realign incentives and rewards to support mission contributions...

(NNMC Organizational Matrix)
As mentioned previously, our transformation ahs allowed for a "flattening" of the organization. This organizational change has occurred in concert with our corporate approach in using the High Performance Organization methodology...

A matrix organizational model was created beginning with the Commander and Deputy Commander and six Directors: Prevention and Wellness, Restorative Care, Clinical Support, Managed Care, Resources, and Administration. All directorates have service lines reporting to them.

Cross functional positions were established which cross and communicate with all Directorates. These positions are: Chief of the Clinical Staff, Chief of the Nursing Staff, Command Master Chief, Director of Medical Education, Chief of Staff for Optimization, and a Representative of the civilian staff. All of these individuals are members of the Board of Directors.

Other entities which cross and communicate with all directorates are the ECOMS, ECONS, Major Command Committees, and PE & I.

Additionally, the command created cross functional Objective Teams to ensure the Strategic Plan and Annual Objectives were operationalized.

(Transformation Message)
Our transformation message was communicated and explained continuously, throughout the command, the National Capital Area, Navy Medicine, and the Line Navy through briefings, newspaper and journal articles, brochures, meetings, focus groups, and in casual conversation. The message was delivered to staff, patients, customers, visitors, and with everyone we came in contact with on a daily basis.

The transformation was not limited within our walls on this compound. It included our 15 Branch Clinics as well...the National Naval Medical Center stretches over five states: Virginia, West Virginia, Pennsylvania, Maryland, New Jersey, and the District of Columbia. Of note, NNMC is also part of a larger healthcare system—TRICARE Region One, which includes:

- 13 states plus the District of Columbia
- 22 Military Medical Treatment Facilities
- 4 Uniformed Services Family Health Plans

(The following information is transcribed from charts on the presentation slides/handout)

Patient Demographics: *NNMC's enrollment catchment area*

CATEGORY	NAVY	ALL SERVICES
Active Duty (AD)	14,337	56,792
AD Family Members	13,395	54,322
Retiree	8,136	31,282
Retiree Family Members	9,445	36,735
Other	1,532	9,168
TOTAL	46,845	188,299

Total Force Personnel (as of April 2001):

Military	
Officer	915
Enlisted	1,263
Total Military	2,178
Civilian	1,006
Contractor	323
Volunteers	199
Grand Total	3,706
Reservists	500

NNMC Workload

Inpatient	FY 00	FY 01 (YTD)
Occupied Bed Days	45,527	20,126

Admission less births	7,836	4,406
Births	1,947	1,141
ALOS	4.4 days	4.2 days
Outpatient visits		
NNMC	491,132	286,343
Branch Clinics	82,028	41,375

Inpatient Bed Capacity (as of 30 March 01)

	Regular	ICU	Total
Certified Beds	225	20	245
Current Operating Beds	197	20	217
Average daily bed census	96	15	111

Regular beds include:

- 8 adolescent psychiatry beds
- 32 obstetrical beds
- 39 neonatal bassinettes
- 15 ambulatory procedure unit beds
- 3 overnight post-anesthesia beds

We have 108 medical-surgical beds with an average daily census of 55.

(FY01 Authority)
NNMC is a $332 million dollar a year enterprise.

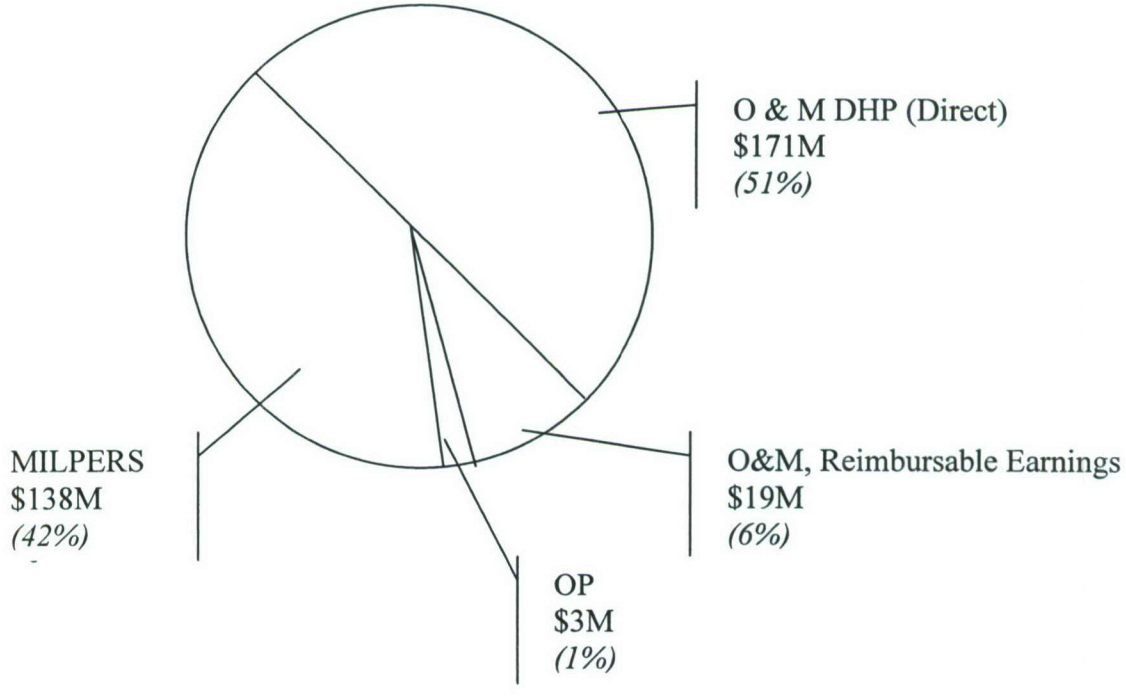


Exhibit 22 IM/IT Goal Team Annual Plan (Brief to BOD, Jan 2001)

Note: Excerpted from Presentation Slides

Slide 1: IM/IT Goal Team Annual Plan Focus Areas

- Common Operating Environment Implementation
- Standardization of Business Processes to Improve Data Entry Integrity
- Improve and Enhance Access to Useful Information
- Improve and Enhance Telecommunications Infrastructure

Slide 2: Historical Background

- Optimal decision making requires that useful information be made available in a timely manner to all services at all levels
- NNMC has moved toward a Common Operating Environment to facilitate efficient access to and flow of information
- Some legacy applications and systems at NNMC are outdated and obsolete
- Legacy systems that cannot be replaced in the near future must be optimized to facilitate timely access to useful information

Slide 3: Key Stakeholders

- Transitional Team Coordinator: LCDR Peterson
- IM/IT Goal Team Members: CAPT Candelaria, CAPT Dinneen, CAPT Haluska, CAPT Funari, CDR Blice, CDR Doyle, CDR Sowell, LT Castro, LT Scott, ENS Peale, Dr. Milman, Chuck Phillips, Joseph Kotek

Slide 4: Desired End State: Improving the focus areas of COE, business processes, quality information and telecommunications infrastructure will strengthen customer service systems, processes and standards to enhance NNMC optimization and organizational efficiency.

Slide 5: Common Operating Environment

- Multiple Network Operating Systems, Applications and Devices can confuse the end user.
- COE Focus Area Coordinator: LCDR Peterson
- Required Tasks: When possible retire/replace obsolete or low value legacy systems (Omni Server)
- Improve functionality of remaining legacy systems

Slide 6: Standardization of Business Processes

- Business processes that compromises data integrity potentially adversely affect optimal decision making
- SBP Focus Area Coordinator: LCDR Doyle
- Required Tasks:
    - Identify and prioritize critical processes
    - Standardize critical processes that support optimal decision making

Slide 7: Access to Useful Information

- Command information systems are supported by multiple applications with separate databases that makes access to data cumbersome and fragmented
- AUI Focus Area Coordinator: LT Scott
- Required Tasks:
    - Define reporting requirements for NNMC
    - Fund and implement technical solutions (Executive Dashboard, Data Warehouse)

Slide 8: Telecommunications Infrastructure

- Current telecommunication infrastructure is expensive and confusing to some end users.
- Focus Area Coordinator: ET1 Koval
- Required Tasks:
    - Define business processes needed for all areas for cost effective phone utilization
    - Prioritize standardized features

Slide 9: Conclusions/Summary/Recommendations

* Improving the focus areas of COE, business processes, quality information and telecommunications infrastructure will strengthen customer service systems, processes and standards to enhance NNMC optimization and organizational efficiency

Exhibit 23 IM/IT Goal Team Annual Plan (Brief to BOD, March 2001)

Note: Excerpted from Presentation Slides. Resident's explanatory comments are italicized.

Slide 1: IM/IT Goal Team Annual Plan Focus Areas

- Common Operating Environment Implementation
- Standardization of Business Processes to Improve Data Entry Integrity
- Improve and Enhance Access to Useful Information
- Improve and Enhance Telecommunications Infrastructure

Slide 2: Historical Background

- Optimal decision making requires that useful information be made available in a timely manner to all services at all levels
- NNMC has moved toward a Common Operating Environment to facilitate efficient access to and flow of information
- Some legacy applications and systems at NNMC are outdated and obsolete
- Legacy systems that cannot be replaced in the near future must be optimized to facilitate timely access to useful information

Slide 3: Desired End State

Improving the focus areas of common operating environment (COE), business processes, quality information and telecommunications infrastructure will strengthen customer service systems, processes and standards to enhance NNMC optimization and organizational efficiency

Slide 4: Common Operating Environment

- Common Operating Environment initiative progressing toward completion. Common platform, operating system and graphical user interface now the "norm" and not the exception.
    - *Centralized computer software and hardware acquisitions process requires CIO's final written approval on all incoming requests from service lines. Service lines are unable to use government purchase cards for computer equipment.*
    - *Centralized purchase/lease process enables ITS to monitor progression towards a common operating environment.*
- Some remaining computers and applications still need to be upgraded in the Command but limited funding from service line OPTAR impacts upgrades.
    - *The Transformation allowed several service lines to budget creatively. Several clinical service lines shared resources, especially if they were physically located nearby. Two services within the Restorative Care Service Line, Musculoskeletal Services and Surgery Services, shared a "closet" that contained network equipment, enabling the two services to share costs for any hardware upgrades.*

Slide 5: Standardization of Business Processes

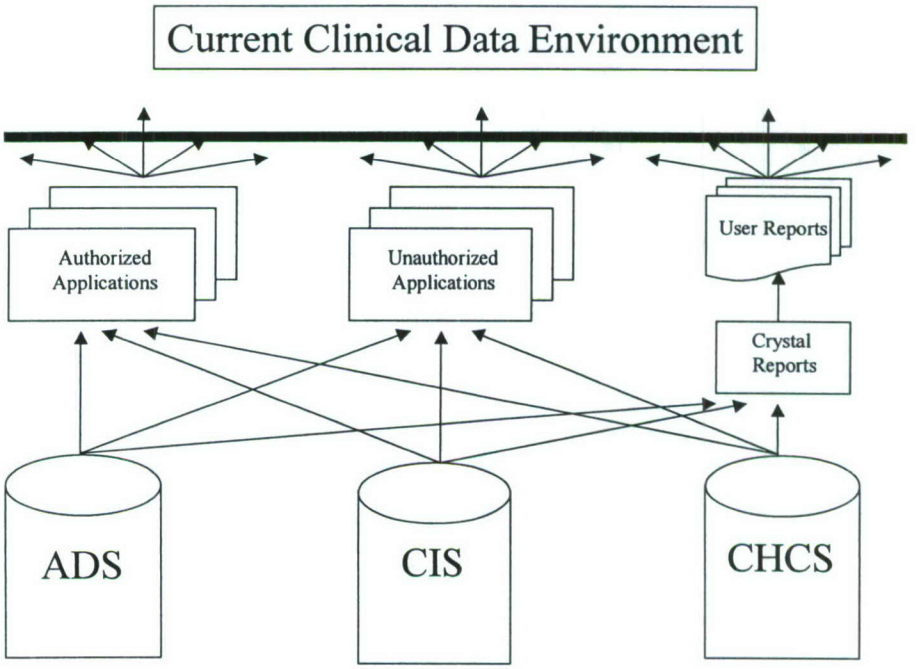
- LCDR Doyle is investigating the cost benefit analysis of bringing in professional coders to support KG-ADS data entry.

  - *At this time, professional coders were hired for inpatient data entry.*
- KG-ADS training is ongoing and progressing within the Command
- KG-ADS deployment to clinics near or at 100%

Slide 6/7: Access to Useful Information

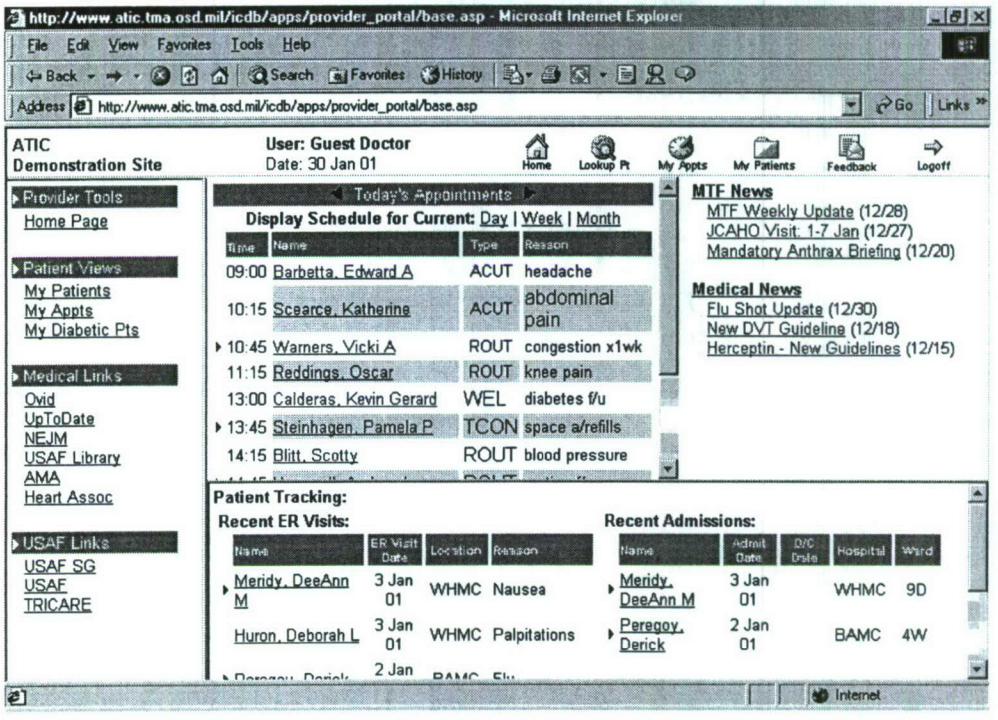
- Command information systems are supported by multiple applications with separate databases that makes access to data cumbersome and fragmented
- CHCS and KG-ADS can be "mined" for data through creation of an Integrated Clinical Database (ICDB) or application of query tools.
- Walter Reed is moving forward with ICDB concept. NNMC is investigating several options from a cost-benefit analysis.
  - *Malcolm Grow AFMC is also moving towards the ICDB concept.*
- IM Goal Team has actively explored ways to make CIS, CHCS, and KG-ADS information more profitable and useful to Command mission.
- One option involves adopting the "Walter Reed" solution
- Another option involves tasking another vendor at NMIMC to a tailor solution for NNMC

Slide 8:



Slide 9/10: *Access to Useful Information such as the ICDB portal for TRICARE Southwest.*

Access to Useful Information
http://icdb.tricaresw.af.mil



Slide 11: Telecommunications Infrastructure

- New, more efficient phone system implementation pending waiver approval from DTSW
    - *The new phone system was expected to lower overall telephone costs which historically accounted for approximately 25% of the IT annual budget.*
- Williams communications will move forward with implementation once waiver is received
    - *Installation of new phones and phone numbers began in October 2001. Tenant commands such as the Medical Inspector General were not officially informed of the changes.*

Slide 12: Conclusions/ Summary/Recommendations

- Improving the focus areas of COE, business processes, quality information and telecommunications infrastructure will strengthen customer service systems, processes and standards to enhance NNMC optimization and organizational efficiency
- IM Goal Team has several interventions in place and ongoing. Some additional intervention noted concerning IDCB need BOD review and approval.

+References

Martin, K.L. (May 2001) Leadership briefing to JCAHO Survey Team.

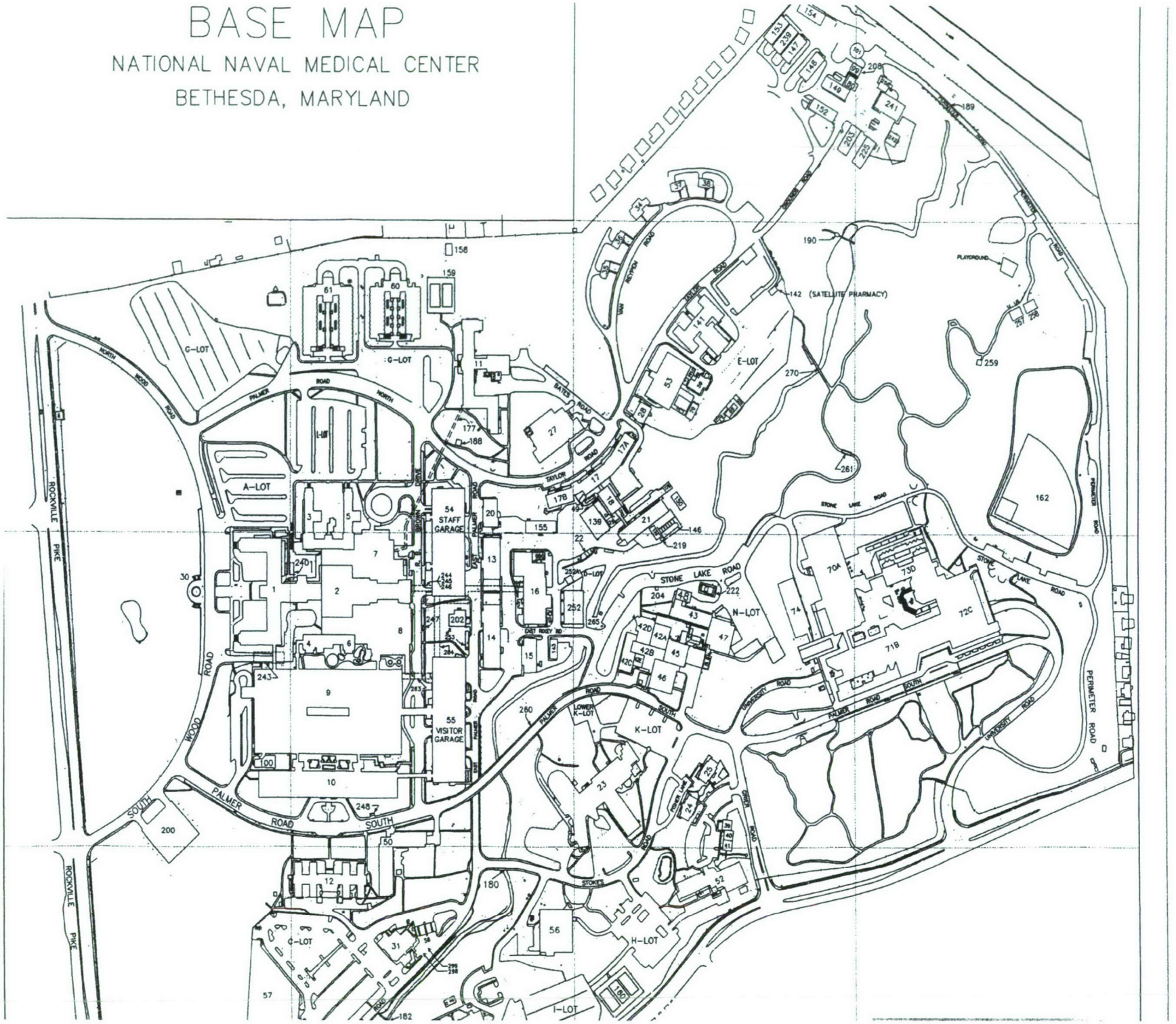
Appendix H

National Naval Medical Center
Base Map NNMC and Key

BASE MAP

NATIONAL NAVAL MEDICAL CENTER

BETHESDA, MARYLAND



BASE MAP NATIONAL NAVAL MEDICAL CENTER-KEY

BUILDING #	GRID #	DESCRIPTION	BUILDING #	GRID #	DESCRIPTION
1	C1	ADMIN/DENTAL CTR (NNMC)	73	C4	USUHS BLDG D
2	C2	ADMIN/SUPPOERT (NNMC)	74	C3	STORAGE FACILITY (USUHS)
3	B2	OFFICE/SWING SPACE (NNMC)	79	B3	CLEAN ROOM FACILITY (NMRI)
4	C2	OFFICE/SWING SPACE (NNMC)	80	A3	PEST CONTROL BLDG (PWC)
5	B2	OFFICE/SWING SPACE/HIV HENRY JACKSON RESEARCH	99	A3	GOV. FILLING STATION (NNMC)
6	C2	OFFICE/SWING SPACE (NNMC)	100	C1	MRI BLDG (NNMC)
7	C2	ADMIN/CLINICAL SPACE (NNMC)	101	A4	SALT STORAGE (PWC)
8	C2	ADMIN/CLINICAL SPACE (NNMC)	139	B3	RESEARCH/FACILITIES STORAGE (NMRI)
9	C2	HOSPITAL (NNMC)	141	B3	TRAINING CENTER (NSHS)
10	C2	HOSPITAL (NNMC)	142	B3	SATELLITE PHARMACY (NNMC)
11	B2	B.O.Q. (NNMC)	143	C2	GENERAL WAREHOUSE (PWC)
12	D2	ADMIN (NNMC)	146	B3	DOG RUN (NMRI)
13	C2	RECEIVING/PLUMBING SHOP (PWC)	147	A3	GENERAL WAREHOUSE (PWC)
14	C2	FACILITIES MANAGEMENT/PUBLIC WORKS CENTER	148	A3	GENERAL WAREHOUSE (NNMC)
15	C2	PAINTING SHOP (PWC)	149	A3	GENERAL WAREHOUSE (PWC)
16	C2	UTILITY PLANT (PWC)	150	B3	(NMRI)
17	B3	NMRI	152	A3	GENERAL WAREHOUSE (NEX)
17A	B3	NMRI	153	A3	GENERAL WAREHOUSE (NNMC)
17B	B2	NMRI	154	A3	GENERAL WAREHOUSE (PWC)
18	B3	NMRI	155	B2	VEHICLE MAINTENANCE (PWC)
20	B2	FIREHOUSE (NNMC)	158	B2	BEQ PAVILION
21	B3	ANIMAL HOUSE (NMRI)	159	B2	TENNIS COURT
22	C3	CHEMICAL BUILDING (NMRI)	160	D3	TENNIS COURT
23	C3	OFFICER'S CLUB/POOL	162	B4	PLAYING FIELD
24	C3	FISHER HOUSE I	174	B3	ANIMAL FOOD STORAGE
25	C3	FISHER HOUSE II	176	B3	(NMRI)
26	D2	CHILD DEVELOPMENT CENTER	177	B2	PEDESTRIAN TUNNEL, BLDG 2 TO 11 (NNMC)
27	B2	NAVAL MEDICAL INFORMATION MANAGEMENT CENTER	180	D2	VEHICLE BRIDGE
28	B3	RESEARCH (NMRI)	181	D2	PEDESTRIAN BRIDGE
29	B3	RESEARCH (NMRI)	182	D2	PEDESTRIAN BRIDGE TO CDC
30	C1	FLAGPOLE	188	B2	UNDERGROUND SHELTER
31	D2	McDONALDS/NEX MINIMART	189	A4	VEHICLE BRIDGE

BUILDING #	GRID #	DESCRIPTION	BUILDING #	GRID #	DESCRIPTION
34	A3	FLAG HOUSING-SURGEON GENERALS QTRS	190	B3	DAM/PEDESTRIAN BRIDGE
35	B3	FLAG HOUSING-NNMC C.O.	200	C1	HELIPORT
36	B3	FLAG HOUSING-OFFICERS	202	C2	ELECTRICAL SWITCHING STATION
37	A3	FLAG HOUSING-OFFICERS	203	A3	GENERAL WAREHOUSE (AFRRI)
38	A3	FLAG HOUSING-OFFICERS	204	C3	PUMP HOUSE (AFRRI)
39	C3	HOUSING-OFFICERS	219	C3	(NMRI)
40	C3	HOUSING-OFFICERS	222	C3	ELECTRICAL SWITCHING STATION (PWC)
41	C3	HOUSING-OFFICERS	225	A4	GENERAL WAREHOUSE (NNMC)
42	C3	REACTOR (AFRRI)	239	A3	GENERAL WAREHOUSE (NNMC)
43	C3	LAB (AFRRI)	240	C1	ELECTRICAL SUBSTATION (PWC)
44	C3	MODULATOR (AFRRI)	241	A4	ROADS & GROUND ADMIN (PWC)
45	C3	PIA BLDG (AFRRI)	242	A4	GENERAL WAREHOUSE (NNMC)
46	C3	LAB (AFRRI)	243	C1	MAIN ELECTRICAL VAULT (PWC)
47	C3	ANIMAL BLDG (AFRRI)	244	C2	ELECTRICAL TUNNEL (PWC)
48	C3	RAD WASTE FACILITY (AFRRI)	245	C2	STEAM TUNNEL (PWC)
49	B3	ROT&E STORAGE (NMRI)	246	C2	CHILLED WATER TUNNEL (PWC)
50	D2	E.M. BACHELOR'S QUARTERS (NNMC)	247	C2	BUS SHELTER
52	D3	NAVY LODGE (NEX)	248	C2	BUS SHELTER
53	B3	DIVING CHAMBER (NMRI)	252	C2	COOLING TOWER (PWC)
54	C2	N. GARAGE/WAREHOUSE/ADMIN (NNMC)	252A	C2	EQUIPMENT STORAGE (PWC)
55	C2	S. GARAGE/ GENERATORS/ WAREHOUSE (NNMC)	253	C2	OXYGEN STORAGE PAD (PWC)
56	D2	BOWLING ALLEY (NEX)	256	A4	HAZARDOUS MATERIAL STORAGE (PWC)
57	D1	NAVY EXCHANGE	257	B4	RECREATION PAVILION
58	D2	NAVY EXCHANGE GAS PUMPS	258	B4	RECREATION PAVILION
59	B3	DIVING TANK (NMRI)	259	B4	RECREATION BATHROOMS
60	B2	B.E.Q. (NNMC)	260	C2	VEHICULAR BRIDGE
61	B2	B.E.Q. (NNMC)	261	B3	PEDESTRIAN BRIDGE
69	B3	HYDROGEN RESEARCH FACILITY (NMRI)	263	C2	SUPPLY TUNNEL BLDG 55 TO 9 (NNMC)
70	C3	USUHS BLDG A	264	C2	MATERIAL HANDLING TUNNEL BETWEEN BLDG 54 & 5
71	C4	USUHS BLDG B	265	C3	VEHICULAR BRIDGE
72	C4	USUHS BLDG C	270	B3	PEDESTRIAN BRIDGE

References

General Frequently Asked Questions. (April 18, 2000). [On-line]. Available: https://nnmc 3.med.navy.mil/nnmc2000/FAQ-GENERAL.asp [October 1, 2000].

Ginter, P., Swayne, L., & Duncan, W. (1998). Strategic Management of Health Care Organizations (3rd ed.). Malden, MA: Blackwell Publishers Inc.

Green, G. (2000). Clinical service lines bring patients into focus. Nursing Management (31), i3: 40.

History of the National Naval Medical Center. (September 12, 2000). [On-line]. Available: https://nnmc 3.med.navy.mil/history.htm [October 1, 2000].

Iannuccillo, G. and McGuirl, J. (1998) Developing a service line approach to quality improvement. Journal of perinatal & neonatal nursing(12), 1: 31.

Kotter, J. (1996). Leading change. Boston: Harvard Business School Press.

Martin, K. (May 16, 2000). NNMC 2000: A vision for the future [On-line]. Available: https://nnmc 3.med.navy.mil/nnmc2000/objectives.asp [October 1, 2000].

Martin, K. (May 17, 2000). Message from the Commander, Rear Adm. Kathleen Martin. [On-line]. Available:

https://nnmc 3.med.navymil/nnmc2000/a new course.asp [October 1, 2000].

National Naval Medical Center. (2000). Transformation and You [Brochure]. Bethesda, MD: Author.

Robbins, S. (1998) Organizational behavior: concepts, controversies, applications, (8th ed.). New Jersey: Prentice-Hall.

Weaver, D. & Sorrells-Jones, J. (1999). Knowledge workers and knowledge-intense organizations, part 2: designing and managing for productivity. Journal of Nursing Administration (29), 9: 19-25.

What is TRICARE? An introduction to TRICARE. (September 18, 2000). [On-line]. Available: http://www.tricare.osd.mil/tricare/beneficiary/whatistricare.htm l [October 1, 2000].

Zablocki, E. (1997). Reorganizing patient care around service lines. Quality letter for healthcare leaders, 9(5), 2-12.